Date of Report: 08/26/2015

Kelsey Padilla

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Client Project:	Fourstar
BCL Project:	Produced Water Pond Testing
BCL Work Order:	1518827
Invoice ID:	B211811

Enclosed are the results of analyses for samples received by the laboratory on 8/3/2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Kerrie Vaughan
Client Services

Authorized Signature

Table of Contents

BC LABORATORIES

4100 Atlas Court Bakersfield, Ca. 93308
(661) 327-4911 • FAX (661) 327-1918 • www.bclabs.com

15-18827

Chain of Custody

* Required Fields

TEMP: _____

Client/Company Name *:	Report Attention *:	Phone * #:	FAX * #:
EnviroTech Consultants	Kelsey Padilla	(661) 703-0065	
		E-mail: kpadilla@envirotechteam.com	

Address *	City *	State *	Zip *
5400 Rosedale Hw	Bakersfield	Ca	93308

Carbon Copies: CDHS ☐ Fresno Co ☐ EPA ☐ Merced Co ☐ Tulare Co ☐ Other:

Project Information: Fourstar | PO # | BCL Quote #

How would you like your completed results sent? ☑ E-Mail ☐ Fax ☑ EDD ☐ Mail Only

Regulatory Compliance Electronic Data Transfer: Y ☐ N ☐ System No. *

Sampler Name Printed / Signature: Kelsey Padilla/

QC Request: ☐ STD ☐ Level II

Result Request ** Surcharge: ☒ STD ☐ 5 Day** ☐ 2 Day** ☐ 1 Day**

Matrix Types: RSW = Raw Surface Water CFW = Clorinated Finished Water CWW = Chorinated Waste Water BW = Bottled Water RGW = Raw Ground Water FW = Finished Water WW = Waste Water SW = Storm Water DW = Drinking Water SO = Solid

ANALYSIS REQUESTED

Sample #	# Bottles	Sampled Date	Sampled Time	Sample Description / Location *	Matrix *	Comments / Station Code	TDS	Metals	Benzene, Toluene, Ethylbenzene, xylenes	Polynuclear aromatic hyrocarbons	Radionuclides	Major/ Minor anions/ cations	Trace Elements		
-1	10	6/3/15	1005	B & M	Water	See Attachment for full analysis	✓	✓	✓	✓	✓	✓	✓		
-2	10	6/3/15	1035	Theta	Water	See Attachment for full analysis	✓	✓	✓	✓	✓	✓	✓		

SHORT HOLDING TIME
Cr^{+6} NO_2 NO_3 OP SS
DO Cl_2 BOD MBAS COT

CHK BY DISTRIBUTION
MW MAIL MJH
SUB-OUT ☐

Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
	Enviro Tech	6/3/15	1320		BC Labs
Relinquished by: (Signature and Printed Name)	Company	Date	Time	Received by (Signature and Print Name)	Company
Received for Lab by: (Signature and Printed Name)		Date	Time	Payment Received at Delivery: Date: Amount: Check/Cash/Card PIA # Init.	

Shipping Method: CAO UPS GSO WALK-IN SJVC FED EX OTHER

Cooling Method: WET BLUE NONE

Packing Material:

SR-FL-0012-00 (Analytical)

Chain of Custody and Cooler Receipt Form for 1518827 Page 2 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 1 Of 2

Submission #: 15-18827

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☒	Ice Chest ☒ None ☐ Box ☐	YES ☐ NO ☐
BC Lab Field Service ☐ Other ☐ (Specify)_____	Other ☐ (Specify)_____	

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? ~~Yes ☑~~ No ☐

JDL

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: Amber Thermometer ID: 208 Date/Time: 8/31/15 1320

Temperature: (A) 15.5 °C / (C) 15.6 °C Analyst Init MMB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES X48	DE									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS M08	FG									
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz M4B	H									
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL 09G	ABC									
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER X3Z	IJ									
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments: They switch B&M and put M4B on the bottles.

Sample Numbering Completed By: JDL Date/Time: 8/31/15 1340

A = Actual / C = Corrected

Rev 20 07/24/2015

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Chain of Custody and Cooler Receipt Form for 1518827 Page 3 of 3

BC LABORATORIES INC. COOLER RECEIPT FORM Page 2 Of 2

Submission #: 15-18827

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ Ontrac ☐ Hand Delivery ☒ BC Lab Field Service ☐ Other ☐ (Specify)_____	Ice Chest ☒ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☐ NO ☐

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: PE Thermometer ID: 208 Date/Time: 8/3/15 1320

Temperature: (A) 11.6 °C / (C) 11.5 °C Analyst Init VMB

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES 1X8	DE									
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{+6}										
QT INORGANIC CHEMICAL METALS M03	FG									
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz M04	H									
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL 0216	ABC									
QT EPA 1664										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548										
QT EPA 549										
QT EPA 8015M										
QT EPA 8270										
8oz / 16oz / 32oz AMBER X3L	EJ									
8oz / 16oz / 32oz JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: JDL Date/Time: 8/3/15 1340

A = Actual / C = Corrected

Rev 20 07/24/2015

[S:\WPDoc\WordPerfect\LAB_DOCS\FORMS\SAMRECrev 20]

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1518827-01	**COC Number:**	---	**Receive Date:**	08/03/2015 13:20
	Project Number:	---	**Sampling Date:**	08/03/2015 10:05
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	M & B	**Lab Matrix:**	Water
	Sampled By:	Kelsey Padilla	**Sample Type:**	Aqueous
1518827-02	**COC Number:**	---	**Receive Date:**	08/03/2015 13:20
	Project Number:	---	**Sampling Date:**	08/03/2015 10:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	Theta	**Lab Matrix:**	Water
	Sampled By:	Kelsey Padilla	**Sample Type:**	Aqueous

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1518827-01 | **Client Sample Name:** M & B, 8/3/2015 10:05:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**3.8**	**ug/L**	**12**	**2.1**	**EPA-8260B**	ND	**J,A01**	1
Bromobenzene	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
Bromochloromethane	ND	ug/L	12	6.0	EPA-8260B	ND	A01	1
Bromodichloromethane	ND	ug/L	12	3.5	EPA-8260B	ND	A01	1
Bromoform	ND	ug/L	12	6.8	EPA-8260B	ND	A01	1
Bromomethane	ND	ug/L	25	6.2	EPA-8260B	ND	A01	1
n-Butylbenzene	ND	ug/L	12	2.8	EPA-8260B	ND	A01	1
sec-Butylbenzene	ND	ug/L	12	3.8	EPA-8260B	ND	A01	1
tert-Butylbenzene	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
Carbon tetrachloride	ND	ug/L	12	4.5	EPA-8260B	ND	A01	1
Chlorobenzene	ND	ug/L	12	2.3	EPA-8260B	ND	A01	1
Chloroethane	ND	ug/L	12	3.5	EPA-8260B	ND	A01	1
Chloroform	ND	ug/L	12	3.0	EPA-8260B	ND	A01	1
Chloromethane	ND	ug/L	12	3.5	EPA-8260B	ND	A01	1
2-Chlorotoluene	ND	ug/L	12	5.0	EPA-8260B	ND	A01	1
4-Chlorotoluene	ND	ug/L	12	3.8	EPA-8260B	ND	A01	1
Dibromochloromethane	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
1,2-Dibromo-3-chloropropane	ND	ug/L	25	11	EPA-8260B	ND	A01	1
1,2-Dibromoethane	ND	ug/L	12	4.0	EPA-8260B	ND	A01	1
Dibromomethane	ND	ug/L	12	6.0	EPA-8260B	ND	A01	1
1,2-Dichlorobenzene	ND	ug/L	12	1.8	EPA-8260B	ND	A01	1
1,3-Dichlorobenzene	ND	ug/L	12	3.8	EPA-8260B	ND	A01	1
1,4-Dichlorobenzene	ND	ug/L	12	1.6	EPA-8260B	ND	A01	1
Dichlorodifluoromethane	ND	ug/L	12	2.5	EPA-8260B	ND	A01	1
1,1-Dichloroethane	ND	ug/L	12	2.8	EPA-8260B	ND	A01	1
1,2-Dichloroethane	ND	ug/L	12	4.2	EPA-8260B	ND	A01	1
1,1-Dichloroethene	ND	ug/L	12	4.5	EPA-8260B	ND	A01	1
cis-1,2-Dichloroethene	ND	ug/L	12	2.1	EPA-8260B	ND	A01	1
trans-1,2-Dichloroethene	ND	ug/L	12	3.8	EPA-8260B	ND	A01	1
1,2-Dichloropropane	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
1,3-Dichloropropane	ND	ug/L	12	2.2	EPA-8260B	ND	A01	1
2,2-Dichloropropane	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
1,1-Dichloropropene	ND	ug/L	12	2.1	EPA-8260B	ND	A01	1

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1518827-01 | **Client Sample Name:** M & B, 8/3/2015 10:05:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	12	3.5	EPA-8260B	ND	A01	1
trans-1,3-Dichloropropene	ND	ug/L	12	2.0	EPA-8260B	ND	A01	1
Ethylbenzene	**130**	**ug/L**	**12**	**2.4**	**EPA-8260B**	ND	**A01**	1
Hexachlorobutadiene	ND	ug/L	12	4.2	EPA-8260B	ND	A01	1
Isopropylbenzene	ND	ug/L	12	3.5	EPA-8260B	ND	A01	1
p-Isopropyltoluene	ND	ug/L	12	3.0	EPA-8260B	ND	A01	1
Methylene chloride	ND	ug/L	25	12	EPA-8260B	ND	A01	1
Methyl t-butyl ether	ND	ug/L	12	2.8	EPA-8260B	ND	A01	1
Naphthalene	ND	ug/L	12	9.0	EPA-8260B	ND	A01	1
n-Propylbenzene	**3.5**	**ug/L**	**12**	**2.8**	**EPA-8260B**	ND	**J,A01**	1
Styrene	ND	ug/L	12	1.7	EPA-8260B	ND	A01	1
1,1,1,2-Tetrachloroethane	ND	ug/L	12	4.5	EPA-8260B	ND	A01	1
1,1,2,2-Tetrachloroethane	ND	ug/L	12	4.2	EPA-8260B	ND	A01	1
Tetrachloroethene	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
Toluene	**6.5**	**ug/L**	**12**	**2.3**	**EPA-8260B**	ND	**J,A01**	1
1,2,3-Trichlorobenzene	ND	ug/L	12	4.0	EPA-8260B	ND	A01	1
1,2,4-Trichlorobenzene	ND	ug/L	12	4.8	EPA-8260B	ND	A01	1
1,1,1-Trichloroethane	ND	ug/L	12	2.8	EPA-8260B	ND	A01	1
1,1,2-Trichloroethane	ND	ug/L	12	4.0	EPA-8260B	ND	A01	1
Trichloroethene	ND	ug/L	12	2.1	EPA-8260B	ND	A01	1
Trichlorofluoromethane	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
1,2,3-Trichloropropane	ND	ug/L	25	6.0	EPA-8260B	ND	A01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	12	3.8	EPA-8260B	ND	A01	1
1,2,4-Trimethylbenzene	**15**	**ug/L**	**12**	**3.0**	**EPA-8260B**	ND	**A01**	1
1,3,5-Trimethylbenzene	**4.0**	**ug/L**	**12**	**3.0**	**EPA-8260B**	ND	**J,A01**	1
Vinyl chloride	ND	ug/L	12	3.0	EPA-8260B	ND	A01	1
Total Xylenes	**930**	**ug/L**	**25**	**9.0**	**EPA-8260B**	ND	**A01**	1
p- & m-Xylenes	**630**	**ug/L**	**12**	**7.0**	**EPA-8260B**	ND	**A01**	1
o-Xylene	**310**	**ug/L**	**12**	**2.0**	**EPA-8260B**	ND	**A01**	1
1,2-Dichloroethane-d4 (Surrogate)	108	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	87.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1

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5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1518827-01 | **Client Sample Name:** M & B, 8/3/2015 10:05:00AM, Kelsey Padilla

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/10/15	08/11/15 09:40	JPT	MS-V13	25	BYH0763

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
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Project Manager: Kelsey Padilla

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 1518827-01 | **Client Sample Name:** M & B, 8/3/2015 10:05:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Acenaphthene	**24**	**ug/L**	**5.0**	**2.8**	**EPA-8270C-SIM**	ND	**A01**	1
Acenaphthylene	**2.6**	**ug/L**	**5.0**	**2.4**	**EPA-8270C-SIM**	ND	**J,A01**	1
Anthracene	ND	ug/L	5.0	0.85	EPA-8270C-SIM	ND	A01	1
Benzo[a]anthracene	**5.3**	**ug/L**	**5.0**	**1.3**	**EPA-8270C-SIM**	ND	**A01**	1
Benzo[b]fluoranthene	**5.2**	**ug/L**	**5.0**	**2.0**	**EPA-8270C-SIM**	ND	**A01**	1
Benzo[k]fluoranthene	ND	ug/L	5.0	2.6	EPA-8270C-SIM	ND	A01	1
Benzo[a]pyrene	ND	ug/L	5.0	1.3	EPA-8270C-SIM	ND	A01	1
Benzo[g,h,i]perylene	ND	ug/L	5.0	2.2	EPA-8270C-SIM	ND	A01	1
Chrysene	**7.4**	**ug/L**	**5.0**	**1.1**	**EPA-8270C-SIM**	ND	**A01**	1
Dibenzo[a,h]anthracene	ND	ug/L	5.0	2.2	EPA-8270C-SIM	ND	A01	1
Fluoranthene	**4.1**	**ug/L**	**5.0**	**0.60**	**EPA-8270C-SIM**	ND	**J,A01**	1
Fluorene	**38**	**ug/L**	**5.0**	**1.5**	**EPA-8270C-SIM**	ND	**A01**	1
Indeno[1,2,3-cd]pyrene	ND	ug/L	5.0	2.2	EPA-8270C-SIM	ND	A01	1
Naphthalene	**28**	**ug/L**	**5.0**	**3.8**	**EPA-8270C-SIM**	ND	**A01**	1
Phenanthrene	**110**	**ug/L**	**5.0**	**1.1**	**EPA-8270C-SIM**	ND	**A01**	1
Pyrene	**9.1**	**ug/L**	**5.0**	**1.1**	**EPA-8270C-SIM**	ND	**A01**	1
Nitrobenzene-d5 (Surrogate)	0	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM		A01,A17	1
2-Fluorobiphenyl (Surrogate)	0	%	50 - 120 (LCL - UCL)		EPA-8270C-SIM		A01,A17	1
p-Terphenyl-d14 (Surrogate)	0	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM		A01,A17	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C-SIM	08/07/15	08/12/15 09:10	MK1	MS-B4	50	BYH1030

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
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Project Manager: Kelsey Padilla

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1518827-01 | **Client Sample Name:** M & B, 8/3/2015 10:05:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	**6600**	**ug/L**	**2500**	**440**	**EPA-8015B**	ND	**A01**	1
a,a,a-Trifluorotoluene (FID Surrogate)	88.5	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/07/15	08/07/15 17:44	AKM	GC-V9	50	BYH0553

Enviro Tech Consultants, Inc.
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Reported: 08/26/2015 10:22
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Total Petroleum Hydrocarbons

BCL Sample ID: 1518827-01 | **Client Sample Name:** M & B, 8/3/2015 10:05:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
TPH - Gasoline	**140000**	**ug/L**	**50000**	**20000**	**EPA-8015B/FFP**	ND	**A01**	1
TPH - Diesel (FFP)	**150000**	**ug/L**	**20000**	**3400**	**EPA-8015B/FFP**	ND	**A01**	1
TPH - Motor Oil	**250000**	**ug/L**	**50000**	**6600**	**EPA-8015B/FFP**	ND	**A01**	1
Tetracosane (Surrogate)	0	%	37 - 134 (LCL - UCL)		EPA-8015B/FFP		A01,A17	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/FFP	08/10/15	08/13/15 11:11	MWB	GC-13	100	BYH0882

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Water Analysis (General Chemistry)

BCL Sample ID: 1518827-01 | **Client Sample Name:** M & B, 8/3/2015 10:05:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MCL	Lab Quals	Run #
Total Calcium	**83**	**mg/L**	**2.0**	**0.30**	**EPA-6010B**		**A07**	1
Total Magnesium	**340**	**mg/L**	**1.0**	**0.38**	**EPA-6010B**		**A07**	1
Total Sodium	**7100**	**mg/L**	**10**	**1.0**	**EPA-6010B**		**A07**	1
Total Potassium	**95**	**mg/L**	**20**	**2.6**	**EPA-6010B**		**A07**	1
Bicarbonate Alkalinity as CaCO3	**3000**	**mg/L**	**8.2**	**8.2**	**SM-2320B**			2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B			2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B			2
Total Alkalinity as CaCO3	**3000**	**mg/L**	**8.2**	**8.2**	**SM-2320B**			2
Bromide	**91**	**mg/L**	**5.0**	**1.8**	**EPA-300.0**		**A07**	3
Chloride	**11000**	**mg/L**	**50**	**6.1**	**EPA-300.0**	600	**A07**	4
Nitrate as NO3	ND	mg/L	22	3.9	EPA-300.0	45	A07	3
Sulfate	**16**	**mg/L**	**50**	**5.0**	**EPA-300.0**	500	**J,A07**	3
Total Dissolved Solids @ 180 C	**19000**	**mg/L**	**1000**	**1000**	**EPA-160.1**	1500		5

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	08/06/15	08/07/15 13:17	ARD	PE-OP3	20	BYH0471
2	SM-2320B	08/05/15	08/05/15 20:31	RML	MET-1	2	BYH0297
3	EPA-300.0	08/03/15	08/03/15 20:30	BMW	IC8	50	BYH0169
4	EPA-300.0	08/03/15	08/03/15 23:48	BMW	IC8	100	BYH0169
5	EPA-160.1	08/06/15	08/06/15 09:00	CAD	MANUAL	100	BYH0419

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Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Metals Analysis

BCL Sample ID: 1518827-01 | **Client Sample Name:** M & B, 8/3/2015 10:05:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MCL	Lab Quals	Run #
Hexavalent Chromium	**480**	**ug/L**	**20**	**7.0**	**EPA-7196**		**A07,Z1**	1
Total Antimony	ND	ug/L	2000	170	EPA-6010B		A07	2
Total Arsenic	ND	ug/L	1000	160	EPA-6010B		A07	2
Total Barium	**4000**	**ug/L**	**200**	**70**	**EPA-6010B**		**A07**	2
Total Beryllium	ND	ug/L	200	10	EPA-6010B		A07	2
Total Boron	**20**	**mg/L**	**2.0**	**0.26**	**EPA-6010B**		**A07**	2
Total Cadmium	ND	ug/L	200	22	EPA-6010B		A07	2
Total Chromium	ND	ug/L	200	22	EPA-6010B		A07	2
Total Cobalt	ND	ug/L	1000	26	EPA-6010B		A07	2
Total Copper	ND	ug/L	200	22	EPA-6010B		A07	2
Total Iron	**12**	**mg/L**	**1.0**	**0.60**	**EPA-6010B**		**A07**	2
Total Lead	ND	ug/L	1000	80	EPA-6010B		A07	2
Total Lithium	**3.1**	**mg/L**	**0.40**	**0.12**	**EPA-6010B**		**A07**	2
Total Manganese	**0.11**	**mg/L**	**0.20**	**0.080**	**EPA-6010B**		**J,A07**	2
Total Mercury	**0.038**	**ug/L**	**0.20**	**0.033**	**EPA-7470A**		**J**	3
Total Molybdenum	ND	ug/L	1000	24	EPA-6010B		A07	2
Total Nickel	ND	ug/L	200	40	EPA-6010B		A07	2
Total Selenium	ND	ug/L	2000	300	EPA-6010B		A07	2
Total Silver	ND	ug/L	200	38	EPA-6010B		A07	2
Total Strontium	**20**	**mg/L**	**0.20**	**0.020**	**EPA-6010B**		**A07**	2
Total Thallium	ND	ug/L	2000	480	EPA-6010B		A07	2
Total Vanadium	ND	ug/L	200	44	EPA-6010B		A07	2
Total Zinc	ND	ug/L	1000	46	EPA-6010B		A07	2
Total Recoverable Uranium	ND	pCi/L	6.7	0.67	EPA-200.8	20	A07	4
Total Recoverable Uranium	ND	ug/L	10	1.0	EPA-200.8	29.850746 2686567	A07	4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	08/04/15	08/04/15 09:51	TDC	KONE-1	10	BYH0355
2	EPA-6010B	08/06/15	08/07/15 13:17	ARD	PE-OP3	20	BYH0471
3	EPA-7470A	08/07/15	08/10/15 09:52	MEV	CETAC1	1	BYH0541
4	EPA-200.8	08/06/15	08/06/15 17:36	GPD	PE-EL3	10	BYH0461

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Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
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Project Manager: Kelsey Padilla

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1518827-02 | **Client Sample Name:** Theta, 8/3/2015 10:35:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	**22**	**ug/L**	**12**	**2.1**	**EPA-8260B**	ND	**A01**	1
Bromobenzene	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
Bromochloromethane	ND	ug/L	12	6.0	EPA-8260B	ND	A01	1
Bromodichloromethane	ND	ug/L	12	3.5	EPA-8260B	ND	A01	1
Bromoform	ND	ug/L	12	6.8	EPA-8260B	ND	A01	1
Bromomethane	ND	ug/L	25	6.2	EPA-8260B	ND	A01	1
n-Butylbenzene	**99**	**ug/L**	**12**	**2.8**	**EPA-8260B**	ND	**A01**	1
sec-Butylbenzene	**150**	**ug/L**	**12**	**3.8**	**EPA-8260B**	ND	**A01**	1
tert-Butylbenzene	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
Carbon tetrachloride	ND	ug/L	12	4.5	EPA-8260B	ND	A01	1
Chlorobenzene	ND	ug/L	12	2.3	EPA-8260B	ND	A01	1
Chloroethane	ND	ug/L	12	3.5	EPA-8260B	ND	A01	1
Chloroform	ND	ug/L	12	3.0	EPA-8260B	ND	A01	1
Chloromethane	ND	ug/L	12	3.5	EPA-8260B	ND	A01	1
2-Chlorotoluene	ND	ug/L	12	5.0	EPA-8260B	ND	A01	1
4-Chlorotoluene	ND	ug/L	12	3.8	EPA-8260B	ND	A01	1
Dibromochloromethane	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
1,2-Dibromo-3-chloropropane	ND	ug/L	25	11	EPA-8260B	ND	A01	1
1,2-Dibromoethane	ND	ug/L	12	4.0	EPA-8260B	ND	A01	1
Dibromomethane	ND	ug/L	12	6.0	EPA-8260B	ND	A01	1
1,2-Dichlorobenzene	ND	ug/L	12	1.8	EPA-8260B	ND	A01	1
1,3-Dichlorobenzene	ND	ug/L	12	3.8	EPA-8260B	ND	A01	1
1,4-Dichlorobenzene	ND	ug/L	12	1.6	EPA-8260B	ND	A01	1
Dichlorodifluoromethane	ND	ug/L	12	2.5	EPA-8260B	ND	A01	1
1,1-Dichloroethane	ND	ug/L	12	2.8	EPA-8260B	ND	A01	1
1,2-Dichloroethane	ND	ug/L	12	4.2	EPA-8260B	ND	A01	1
1,1-Dichloroethene	ND	ug/L	12	4.5	EPA-8260B	ND	A01	1
cis-1,2-Dichloroethene	ND	ug/L	12	2.1	EPA-8260B	ND	A01	1
trans-1,2-Dichloroethene	ND	ug/L	12	3.8	EPA-8260B	ND	A01	1
1,2-Dichloropropane	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
1,3-Dichloropropane	ND	ug/L	12	2.2	EPA-8260B	ND	A01	1
2,2-Dichloropropane	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
1,1-Dichloropropene	ND	ug/L	12	2.1	EPA-8260B	ND	A01	1

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Reported: 08/26/2015 10:22
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Project Manager: Kelsey Padilla

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1518827-02 | **Client Sample Name:** Theta, 8/3/2015 10:35:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
cis-1,3-Dichloropropene	ND	ug/L	12	3.5	EPA-8260B	ND	A01	1
trans-1,3-Dichloropropene	ND	ug/L	12	2.0	EPA-8260B	ND	A01	1
Ethylbenzene	**880**	**ug/L**	**12**	**2.4**	**EPA-8260B**	ND	**A01**	1
Hexachlorobutadiene	ND	ug/L	12	4.2	EPA-8260B	ND	A01	1
Isopropylbenzene	**150**	**ug/L**	**12**	**3.5**	**EPA-8260B**	ND	**A01**	1
p-Isopropyltoluene	**320**	**ug/L**	**12**	**3.0**	**EPA-8260B**	ND	**A01**	1
Methylene chloride	ND	ug/L	25	12	EPA-8260B	ND	A01	1
Methyl t-butyl ether	ND	ug/L	12	2.8	EPA-8260B	ND	A01	1
Naphthalene	ND	ug/L	12	9.0	EPA-8260B	ND	A01	1
n-Propylbenzene	**99**	**ug/L**	**12**	**2.8**	**EPA-8260B**	ND	**A01**	1
Styrene	ND	ug/L	12	1.7	EPA-8260B	ND	A01	1
1,1,1,2-Tetrachloroethane	ND	ug/L	12	4.5	EPA-8260B	ND	A01	1
1,1,2,2-Tetrachloroethane	ND	ug/L	12	4.2	EPA-8260B	ND	A01	1
Tetrachloroethene	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
Toluene	**28**	**ug/L**	**12**	**2.3**	**EPA-8260B**	ND	**A01**	1
1,2,3-Trichlorobenzene	ND	ug/L	12	4.0	EPA-8260B	ND	A01	1
1,2,4-Trichlorobenzene	ND	ug/L	12	4.8	EPA-8260B	ND	A01	1
1,1,1-Trichloroethane	ND	ug/L	12	2.8	EPA-8260B	ND	A01	1
1,1,2-Trichloroethane	ND	ug/L	12	4.0	EPA-8260B	ND	A01	1
Trichloroethene	ND	ug/L	12	2.1	EPA-8260B	ND	A01	1
Trichlorofluoromethane	ND	ug/L	12	3.2	EPA-8260B	ND	A01	1
1,2,3-Trichloropropane	ND	ug/L	25	6.0	EPA-8260B	ND	A01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	12	3.8	EPA-8260B	ND	A01	1
1,2,4-Trimethylbenzene	**19**	**ug/L**	**12**	**3.0**	**EPA-8260B**	ND	**A01**	1
1,3,5-Trimethylbenzene	ND	ug/L	12	3.0	EPA-8260B	ND	A01	1
Vinyl chloride	ND	ug/L	12	3.0	EPA-8260B	ND	A01	1
Total Xylenes	**4100**	**ug/L**	**25**	**9.0**	**EPA-8260B**	ND	**A01**	1
p- & m-Xylenes	**2900**	**ug/L**	**12**	**7.0**	**EPA-8260B**	ND	**A01**	1
o-Xylene	**1200**	**ug/L**	**12**	**2.0**	**EPA-8260B**	ND	**A01**	1
1,2-Dichloroethane-d4 (Surrogate)	109	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	103	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	135	%	80 - 120 (LCL - UCL)		EPA-8260B		A19,S09	1

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Project Manager: Kelsey Padilla

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1518827-02 | **Client Sample Name:** Theta, 8/3/2015 10:35:00AM, Kelsey Padilla

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	08/10/15	08/11/15 10:04	JPT	MS-V13	25	BYH0764

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Project Manager: Kelsey Padilla

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 1518827-02 | **Client Sample Name:** Theta, 8/3/2015 10:35:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Acenaphthene	**120**	**ug/L**	**25**	**14**	**EPA-8270C-SIM**	ND	**A01**	1
Acenaphthylene	**84**	**ug/L**	**5.0**	**2.4**	**EPA-8270C-SIM**	ND	**A01**	2
Anthracene	ND	ug/L	5.0	0.85	EPA-8270C-SIM	ND	A01	2
Benzo[a]anthracene	**14**	**ug/L**	**5.0**	**1.3**	**EPA-8270C-SIM**	ND	**A01**	2
Benzo[b]fluoranthene	**29**	**ug/L**	**5.0**	**2.0**	**EPA-8270C-SIM**	ND	**A01**	2
Benzo[k]fluoranthene	ND	ug/L	5.0	2.6	EPA-8270C-SIM	ND	A01	2
Benzo[a]pyrene	**14**	**ug/L**	**5.0**	**1.3**	**EPA-8270C-SIM**	ND	**A01**	2
Benzo[g,h,i]perylene	**5.4**	**ug/L**	**5.0**	**2.2**	**EPA-8270C-SIM**	ND	**A01**	2
Chrysene	**52**	**ug/L**	**25**	**5.5**	**EPA-8270C-SIM**	ND	**A01**	1
Dibenzo[a,h]anthracene	**7.1**	**ug/L**	**5.0**	**2.2**	**EPA-8270C-SIM**	ND	**A01**	2
Fluoranthene	**5.8**	**ug/L**	**5.0**	**0.60**	**EPA-8270C-SIM**	ND	**A01**	2
Fluorene	**510**	**ug/L**	**25**	**7.5**	**EPA-8270C-SIM**	ND	**A01**	1
Indeno[1,2,3-cd]pyrene	ND	ug/L	5.0	2.2	EPA-8270C-SIM	ND	A01	2
Naphthalene	**35**	**ug/L**	**25**	**19**	**EPA-8270C-SIM**	ND	**A01**	1
Phenanthrene	**1000**	**ug/L**	**50**	**11**	**EPA-8270C-SIM**	ND	**A01**	3
Pyrene	**50**	**ug/L**	**25**	**5.5**	**EPA-8270C-SIM**	ND	**A01**	1
Nitrobenzene-d5 (Surrogate)	0	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM		A01,A17	2
2-Fluorobiphenyl (Surrogate)	0	%	50 - 120 (LCL - UCL)		EPA-8270C-SIM		A01,A17	2
p-Terphenyl-d14 (Surrogate)	0	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM		A01,A17	2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8270C-SIM	08/07/15	08/18/15 01:04	MK1	MS-B4	250	BYH1030
2	EPA-8270C-SIM	08/07/15	08/12/15 09:36	MK1	MS-B4	50	BYH1030
3	EPA-8270C-SIM	08/07/15	08/18/15 01:31	MK1	MS-B4	500	BYH1030

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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1518827-02 | **Client Sample Name:** Theta, 8/3/2015 10:35:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	**40000**	**ug/L**	**2500**	**440**	**EPA-8015B**	ND	**A01**	1
a,a,a-Trifluorotoluene (FID Surrogate)	89.8	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	08/07/15	08/07/15 18:04	AKM	GC-V9	50	BYH0553

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Total Petroleum Hydrocarbons

BCL Sample ID: 1518827-02 | **Client Sample Name:** Theta, 8/3/2015 10:35:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
TPH - Gasoline	**350000**	**ug/L**	**100000**	**40000**	**EPA-8015B/FFP**	ND	**A01**	1
TPH - Diesel (FFP)	**230000**	**ug/L**	**40000**	**6800**	**EPA-8015B/FFP**	ND	**A01**	1
TPH - Motor Oil	**270000**	**ug/L**	**100000**	**13000**	**EPA-8015B/FFP**	ND	**A01**	1
Tetracosane (Surrogate)	0	%	37 - 134 (LCL - UCL)		EPA-8015B/FFP		A01,A17	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B/FFP	08/10/15	08/13/15 11:34	MWB	GC-13	200	BYH0882

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Project Number: Fourstar
Project Manager: Kelsey Padilla

Water Analysis (General Chemistry)

BCL Sample ID: 1518827-02 | **Client Sample Name:** Theta, 8/3/2015 10:35:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MCL	Lab Quals	Run #
Total Calcium	**70**	**mg/L**	**2.0**	**0.30**	**EPA-6010B**		**A07**	1
Total Magnesium	**47**	**mg/L**	**1.0**	**0.38**	**EPA-6010B**		**A07**	1
Total Sodium	**5800**	**mg/L**	**10**	**1.0**	**EPA-6010B**		**A07**	1
Total Potassium	**36**	**mg/L**	**20**	**2.6**	**EPA-6010B**		**A07**	1
Bicarbonate Alkalinity as CaCO3	**1900**	**mg/L**	**8.2**	**8.2**	**SM-2320B**			2
Carbonate Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B			2
Hydroxide Alkalinity as CaCO3	ND	mg/L	8.2	8.2	SM-2320B			2
Total Alkalinity as CaCO3	**1900**	**mg/L**	**8.2**	**8.2**	**SM-2320B**			2
Bromide	**46**	**mg/L**	**5.0**	**1.8**	**EPA-300.0**		**A07**	3
Chloride	**7200**	**mg/L**	**25**	**3.0**	**EPA-300.0**	600	**A07**	3
Nitrate as NO3	ND	mg/L	22	3.9	EPA-300.0	45	A07	3
Sulfate	**16**	**mg/L**	**50**	**5.0**	**EPA-300.0**	500	**J,A07**	3
Total Dissolved Solids @ 180 C	**14000**	**mg/L**	**1000**	**1000**	**EPA-160.1**	1500		4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-6010B	08/06/15	08/07/15 13:19	ARD	PE-OP3	20	BYH0471
2	SM-2320B	08/05/15	08/05/15 20:44	RML	MET-1	2	BYH0297
3	EPA-300.0	08/03/15	08/03/15 20:48	BMW	IC8	50	BYH0169
4	EPA-160.1	08/06/15	08/06/15 09:00	CAD	MANUAL	100	BYH0419

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Reported: 08/26/2015 10:22
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Project Manager: Kelsey Padilla

Metals Analysis

BCL Sample ID: 1518827-02 | **Client Sample Name:** Theta, 8/3/2015 10:35:00AM, Kelsey Padilla

Constituent	Result	Units	PQL	MDL	Method	MCL	Lab Quals	Run #
Hexavalent Chromium	**42**	**ug/L**	**100**	**35**	**EPA-7196**		**J,A07**	1
Total Antimony	ND	ug/L	2000	170	EPA-6010B		A07	2
Total Arsenic	ND	ug/L	1000	160	EPA-6010B		A07	2
Total Barium	**1800**	**ug/L**	**200**	**70**	**EPA-6010B**		**A07**	2
Total Beryllium	ND	ug/L	200	10	EPA-6010B		A07	2
Total Boron	**32**	**mg/L**	**2.0**	**0.26**	**EPA-6010B**		**A07**	2
Total Cadmium	ND	ug/L	200	22	EPA-6010B		A07	2
Total Chromium	ND	ug/L	200	22	EPA-6010B		A07	2
Total Cobalt	ND	ug/L	1000	26	EPA-6010B		A07	2
Total Copper	**40**	**ug/L**	**200**	**22**	**EPA-6010B**		**J,A07**	2
Total Iron	**23**	**mg/L**	**1.0**	**0.60**	**EPA-6010B**		**A07**	2
Total Lead	ND	ug/L	1000	80	EPA-6010B		A07	2
Total Lithium	**2.0**	**mg/L**	**0.40**	**0.12**	**EPA-6010B**		**A07**	2
Total Manganese	**0.62**	**mg/L**	**0.20**	**0.080**	**EPA-6010B**		**A07**	2
Total Mercury	ND	ug/L	0.20	0.033	EPA-7470A			3
Total Molybdenum	**75**	**ug/L**	**1000**	**24**	**EPA-6010B**		**J,A07**	2
Total Nickel	ND	ug/L	200	40	EPA-6010B		A07	2
Total Selenium	ND	ug/L	2000	300	EPA-6010B		A07	2
Total Silver	ND	ug/L	200	38	EPA-6010B		A07	2
Total Strontium	**6.6**	**mg/L**	**0.20**	**0.020**	**EPA-6010B**		**A07**	2
Total Thallium	ND	ug/L	2000	480	EPA-6010B		A07	2
Total Vanadium	ND	ug/L	200	44	EPA-6010B		A07	2
Total Zinc	ND	ug/L	1000	46	EPA-6010B		A07	2
Total Recoverable Uranium	ND	pCi/L	6.7	0.67	EPA-200.8	20	A07	4
Total Recoverable Uranium	ND	ug/L	10	1.0	EPA-200.8	29.850746 2686567	A07	4

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-7196	08/04/15	08/04/15 10:12	TDC	KONE-1	50	BYH0355
2	EPA-6010B	08/06/15	08/07/15 13:19	ARD	PE-OP3	20	BYH0471
3	EPA-7470A	08/07/15	08/10/15 09:54	MEV	CETAC1	1	BYH0541
4	EPA-200.8	08/06/15	08/06/15 17:39	GPD	PE-EL3	10	BYH0461

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH0763						
Benzene	BYH0763-BLK1	ND	ug/L	0.50	0.083	
Bromobenzene	BYH0763-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYH0763-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYH0763-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYH0763-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYH0763-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYH0763-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYH0763-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYH0763-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYH0763-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYH0763-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYH0763-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYH0763-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYH0763-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYH0763-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYH0763-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYH0763-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYH0763-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYH0763-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYH0763-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYH0763-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYH0763-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYH0763-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYH0763-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYH0763-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYH0763-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYH0763-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYH0763-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYH0763-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYH0763-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYH0763-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYH0763-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYH0763-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYH0763-BLK1	ND	ug/L	0.50	0.14	

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Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH0763						
trans-1,3-Dichloropropene	BYH0763-BLK1	ND	ug/L	0.50	0.079	
Ethylbenzene	BYH0763-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYH0763-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYH0763-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYH0763-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYH0763-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	BYH0763-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYH0763-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYH0763-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYH0763-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYH0763-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYH0763-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYH0763-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYH0763-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYH0763-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYH0763-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYH0763-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYH0763-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYH0763-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYH0763-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYH0763-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYH0763-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYH0763-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYH0763-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYH0763-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	BYH0763-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BYH0763-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYH0763-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYH0763-BLK1**	**99.2**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYH0763-BLK1**	**95.9**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYH0763-BLK1**	**91.1**	%	**80 - 120 (LCL - UCL)**		
QC Batch ID: BYH0764						
Benzene	BYH0764-BLK1	ND	ug/L	0.50	0.083	

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Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH0764						
Bromobenzene	BYH0764-BLK1	ND	ug/L	0.50	0.13	
Bromochloromethane	BYH0764-BLK1	ND	ug/L	0.50	0.24	
Bromodichloromethane	BYH0764-BLK1	ND	ug/L	0.50	0.14	
Bromoform	BYH0764-BLK1	ND	ug/L	0.50	0.27	
Bromomethane	BYH0764-BLK1	ND	ug/L	1.0	0.25	
n-Butylbenzene	BYH0764-BLK1	ND	ug/L	0.50	0.11	
sec-Butylbenzene	BYH0764-BLK1	ND	ug/L	0.50	0.15	
tert-Butylbenzene	BYH0764-BLK1	ND	ug/L	0.50	0.13	
Carbon tetrachloride	BYH0764-BLK1	ND	ug/L	0.50	0.18	
Chlorobenzene	BYH0764-BLK1	ND	ug/L	0.50	0.093	
Chloroethane	BYH0764-BLK1	ND	ug/L	0.50	0.14	
Chloroform	BYH0764-BLK1	ND	ug/L	0.50	0.12	
Chloromethane	BYH0764-BLK1	ND	ug/L	0.50	0.14	
2-Chlorotoluene	BYH0764-BLK1	ND	ug/L	0.50	0.20	
4-Chlorotoluene	BYH0764-BLK1	ND	ug/L	0.50	0.15	
Dibromochloromethane	BYH0764-BLK1	ND	ug/L	0.50	0.13	
1,2-Dibromo-3-chloropropane	BYH0764-BLK1	ND	ug/L	1.0	0.44	
1,2-Dibromoethane	BYH0764-BLK1	ND	ug/L	0.50	0.16	
Dibromomethane	BYH0764-BLK1	ND	ug/L	0.50	0.24	
1,2-Dichlorobenzene	BYH0764-BLK1	ND	ug/L	0.50	0.072	
1,3-Dichlorobenzene	BYH0764-BLK1	ND	ug/L	0.50	0.15	
1,4-Dichlorobenzene	BYH0764-BLK1	ND	ug/L	0.50	0.062	
Dichlorodifluoromethane	BYH0764-BLK1	ND	ug/L	0.50	0.099	
1,1-Dichloroethane	BYH0764-BLK1	ND	ug/L	0.50	0.11	
1,2-Dichloroethane	BYH0764-BLK1	ND	ug/L	0.50	0.17	
1,1-Dichloroethene	BYH0764-BLK1	ND	ug/L	0.50	0.18	
cis-1,2-Dichloroethene	BYH0764-BLK1	ND	ug/L	0.50	0.085	
trans-1,2-Dichloroethene	BYH0764-BLK1	ND	ug/L	0.50	0.15	
1,2-Dichloropropane	BYH0764-BLK1	ND	ug/L	0.50	0.13	
1,3-Dichloropropane	BYH0764-BLK1	ND	ug/L	0.50	0.086	
2,2-Dichloropropane	BYH0764-BLK1	ND	ug/L	0.50	0.13	
1,1-Dichloropropene	BYH0764-BLK1	ND	ug/L	0.50	0.085	
cis-1,3-Dichloropropene	BYH0764-BLK1	ND	ug/L	0.50	0.14	
trans-1,3-Dichloropropene	BYH0764-BLK1	ND	ug/L	0.50	0.079	

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Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH0764						
Ethylbenzene	BYH0764-BLK1	ND	ug/L	0.50	0.098	
Hexachlorobutadiene	BYH0764-BLK1	ND	ug/L	0.50	0.17	
Isopropylbenzene	BYH0764-BLK1	ND	ug/L	0.50	0.14	
p-Isopropyltoluene	BYH0764-BLK1	ND	ug/L	0.50	0.12	
Methylene chloride	BYH0764-BLK1	ND	ug/L	1.0	0.48	
Methyl t-butyl ether	BYH0764-BLK1	ND	ug/L	0.50	0.11	
Naphthalene	BYH0764-BLK1	ND	ug/L	0.50	0.36	
n-Propylbenzene	BYH0764-BLK1	ND	ug/L	0.50	0.11	
Styrene	BYH0764-BLK1	ND	ug/L	0.50	0.068	
1,1,1,2-Tetrachloroethane	BYH0764-BLK1	ND	ug/L	0.50	0.18	
1,1,2,2-Tetrachloroethane	BYH0764-BLK1	ND	ug/L	0.50	0.17	
Tetrachloroethene	BYH0764-BLK1	ND	ug/L	0.50	0.13	
Toluene	BYH0764-BLK1	ND	ug/L	0.50	0.093	
1,2,3-Trichlorobenzene	BYH0764-BLK1	ND	ug/L	0.50	0.16	
1,2,4-Trichlorobenzene	BYH0764-BLK1	ND	ug/L	0.50	0.19	
1,1,1-Trichloroethane	BYH0764-BLK1	ND	ug/L	0.50	0.11	
1,1,2-Trichloroethane	BYH0764-BLK1	ND	ug/L	0.50	0.16	
Trichloroethene	BYH0764-BLK1	ND	ug/L	0.50	0.085	
Trichlorofluoromethane	BYH0764-BLK1	ND	ug/L	0.50	0.13	
1,2,3-Trichloropropane	BYH0764-BLK1	ND	ug/L	1.0	0.24	
1,1,2-Trichloro-1,2,2-trifluoroethane	BYH0764-BLK1	ND	ug/L	0.50	0.15	
1,2,4-Trimethylbenzene	BYH0764-BLK1	ND	ug/L	0.50	0.12	
1,3,5-Trimethylbenzene	BYH0764-BLK1	ND	ug/L	0.50	0.12	
Vinyl chloride	BYH0764-BLK1	ND	ug/L	0.50	0.12	
Total Xylenes	BYH0764-BLK1	ND	ug/L	1.0	0.36	
p- & m-Xylenes	BYH0764-BLK1	ND	ug/L	0.50	0.28	
o-Xylene	BYH0764-BLK1	ND	ug/L	0.50	0.082	
1,2-Dichloroethane-d4 (Surrogate)	**BYH0764-BLK1**	**101**	%	**75 - 125 (LCL - UCL)**		
Toluene-d8 (Surrogate)	**BYH0764-BLK1**	**97.4**	%	**80 - 120 (LCL - UCL)**		
4-Bromofluorobenzene (Surrogate)	**BYH0764-BLK1**	**86.5**	%	**80 - 120 (LCL - UCL)**		

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Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYH0763										
Benzene	BYH0763-BS1	LCS	24.740	25.000	ug/L	99.0		70 - 130		
Bromodichloromethane	BYH0763-BS1	LCS	25.850	25.000	ug/L	103		70 - 130		
Chlorobenzene	BYH0763-BS1	LCS	24.610	25.000	ug/L	98.4		70 - 130		
Chloroethane	BYH0763-BS1	LCS	29.620	25.000	ug/L	118		70 - 130		
1,4-Dichlorobenzene	BYH0763-BS1	LCS	25.090	25.000	ug/L	100		70 - 130		
1,1-Dichloroethane	BYH0763-BS1	LCS	25.910	25.000	ug/L	104		70 - 130		
1,1-Dichloroethene	BYH0763-BS1	LCS	28.330	25.000	ug/L	113		70 - 130		
Toluene	BYH0763-BS1	LCS	26.260	25.000	ug/L	105		70 - 130		
Trichloroethene	BYH0763-BS1	LCS	27.000	25.000	ug/L	108		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYH0763-BS1	LCS	9.5300	10.000	ug/L	95.3		75 - 125		
Toluene-d8 (Surrogate)	BYH0763-BS1	LCS	10.020	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYH0763-BS1	LCS	9.6000	10.000	ug/L	96.0		80 - 120		
QC Batch ID: BYH0764										
Benzene	BYH0764-BS1	LCS	23.930	25.000	ug/L	95.7		70 - 130		
Bromodichloromethane	BYH0764-BS1	LCS	25.740	25.000	ug/L	103		70 - 130		
Chlorobenzene	BYH0764-BS1	LCS	24.580	25.000	ug/L	98.3		70 - 130		
Chloroethane	BYH0764-BS1	LCS	29.730	25.000	ug/L	119		70 - 130		
1,4-Dichlorobenzene	BYH0764-BS1	LCS	25.160	25.000	ug/L	101		70 - 130		
1,1-Dichloroethane	BYH0764-BS1	LCS	24.300	25.000	ug/L	97.2		70 - 130		
1,1-Dichloroethene	BYH0764-BS1	LCS	26.580	25.000	ug/L	106		70 - 130		
Toluene	BYH0764-BS1	LCS	25.530	25.000	ug/L	102		70 - 130		
Trichloroethene	BYH0764-BS1	LCS	26.960	25.000	ug/L	108		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BYH0764-BS1	LCS	9.5400	10.000	ug/L	95.4		75 - 125		
Toluene-d8 (Surrogate)	BYH0764-BS1	LCS	10.280	10.000	ug/L	103		80 - 120		
4-Bromofluorobenzene (Surrogate)	BYH0764-BS1	LCS	9.4100	10.000	ug/L	94.1		80 - 120		

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Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH0763	Used client sample: N										
Benzene	MS	1516891-53	ND	25.200	25.000	ug/L		101		70 - 130	
	MSD	1516891-53	ND	24.650	25.000	ug/L	2.2	98.6	20	70 - 130	
Bromodichloromethane	MS	1516891-53	ND	26.540	25.000	ug/L		106		70 - 130	
	MSD	1516891-53	ND	26.220	25.000	ug/L	1.2	105	20	70 - 130	
Chlorobenzene	MS	1516891-53	ND	24.610	25.000	ug/L		98.4		70 - 130	
	MSD	1516891-53	ND	24.480	25.000	ug/L	0.5	97.9	20	70 - 130	
Chloroethane	MS	1516891-53	ND	30.020	25.000	ug/L		120		70 - 130	
	MSD	1516891-53	ND	28.230	25.000	ug/L	6.1	113	20	70 - 130	
1,4-Dichlorobenzene	MS	1516891-53	ND	24.850	25.000	ug/L		99.4		70 - 130	
	MSD	1516891-53	ND	24.800	25.000	ug/L	0.2	99.2	20	70 - 130	
1,1-Dichloroethane	MS	1516891-53	ND	25.940	25.000	ug/L		104		70 - 130	
	MSD	1516891-53	ND	25.660	25.000	ug/L	1.1	103	20	70 - 130	
1,1-Dichloroethene	MS	1516891-53	ND	28.680	25.000	ug/L		115		70 - 130	
	MSD	1516891-53	ND	28.500	25.000	ug/L	0.6	114	20	70 - 130	
Toluene	MS	1516891-53	ND	27.100	25.000	ug/L		108		70 - 130	
	MSD	1516891-53	ND	26.210	25.000	ug/L	3.3	105	20	70 - 130	
Trichloroethene	MS	1516891-53	ND	27.780	25.000	ug/L		111		70 - 130	
	MSD	1516891-53	ND	27.010	25.000	ug/L	2.8	108	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1516891-53	ND	9.2200	10.000	ug/L		92.2		75 - 125	
	MSD	1516891-53	ND	9.5000	10.000	ug/L	3.0	95.0		75 - 125	
Toluene-d8 (Surrogate)	MS	1516891-53	ND	10.280	10.000	ug/L		103		80 - 120	
	MSD	1516891-53	ND	10.070	10.000	ug/L	2.1	101		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1516891-53	ND	9.4300	10.000	ug/L		94.3		80 - 120	
	MSD	1516891-53	ND	9.8400	10.000	ug/L	4.3	98.4		80 - 120	
QC Batch ID: BYH0764	Used client sample: N										
Benzene	MS	1516891-54	ND	24.760	25.000	ug/L		99.0		70 - 130	
	MSD	1516891-54	ND	25.190	25.000	ug/L	1.7	101	20	70 - 130	
Bromodichloromethane	MS	1516891-54	ND	26.570	25.000	ug/L		106		70 - 130	
	MSD	1516891-54	ND	26.680	25.000	ug/L	0.4	107	20	70 - 130	
Chlorobenzene	MS	1516891-54	ND	24.650	25.000	ug/L		98.6		70 - 130	
	MSD	1516891-54	ND	24.470	25.000	ug/L	0.7	97.9	20	70 - 130	
Chloroethane	MS	1516891-54	ND	30.040	25.000	ug/L		120		70 - 130	
	MSD	1516891-54	ND	28.540	25.000	ug/L	5.1	114	20	70 - 130	
1,4-Dichlorobenzene	MS	1516891-54	ND	26.100	25.000	ug/L		104		70 - 130	
	MSD	1516891-54	ND	25.350	25.000	ug/L	2.9	101	20	70 - 130	
1,1-Dichloroethane	MS	1516891-54	ND	25.170	25.000	ug/L		101		70 - 130	
	MSD	1516891-54	ND	25.730	25.000	ug/L	2.2	103	20	70 - 130	

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Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH0764	Used client sample: N										
1,1-Dichloroethene	MS	1516891-54	ND	27.010	25.000	ug/L		108		70 - 130	
	MSD	1516891-54	ND	28.320	25.000	ug/L	4.7	113	20	70 - 130	
Toluene	MS	1516891-54	ND	25.730	25.000	ug/L		103		70 - 130	
	MSD	1516891-54	ND	26.380	25.000	ug/L	2.5	106	20	70 - 130	
Trichloroethene	MS	1516891-54	ND	27.420	25.000	ug/L		110		70 - 130	
	MSD	1516891-54	ND	26.740	25.000	ug/L	2.5	107	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1516891-54	ND	9.8300	10.000	ug/L		98.3		75 - 125	
	MSD	1516891-54	ND	9.6600	10.000	ug/L	1.7	96.6		75 - 125	
Toluene-d8 (Surrogate)	MS	1516891-54	ND	10.070	10.000	ug/L		101		80 - 120	
	MSD	1516891-54	ND	9.9800	10.000	ug/L	0.9	99.8		80 - 120	
4-Bromofluorobenzene (Surrogate)	MS	1516891-54	ND	9.8800	10.000	ug/L		98.8		80 - 120	
	MSD	1516891-54	ND	9.3500	10.000	ug/L	5.5	93.5		80 - 120	

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Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH1030						
Acenaphthene	BYH1030-BLK1	ND	ug/L	0.10	0.055	
Acenaphthylene	BYH1030-BLK1	ND	ug/L	0.10	0.047	
Anthracene	BYH1030-BLK1	ND	ug/L	0.10	0.017	
Benzo[a]anthracene	BYH1030-BLK1	ND	ug/L	0.10	0.026	
Benzo[b]fluoranthene	BYH1030-BLK1	ND	ug/L	0.10	0.040	
Benzo[k]fluoranthene	BYH1030-BLK1	ND	ug/L	0.10	0.051	
Benzo[a]pyrene	BYH1030-BLK1	ND	ug/L	0.10	0.026	
Benzo[g,h,i]perylene	BYH1030-BLK1	ND	ug/L	0.10	0.043	
Chrysene	BYH1030-BLK1	ND	ug/L	0.10	0.022	
Dibenzo[a,h]anthracene	BYH1030-BLK1	ND	ug/L	0.10	0.044	
Fluoranthene	BYH1030-BLK1	ND	ug/L	0.10	0.012	
Fluorene	BYH1030-BLK1	ND	ug/L	0.10	0.030	
Indeno[1,2,3-cd]pyrene	BYH1030-BLK1	ND	ug/L	0.10	0.044	
Naphthalene	BYH1030-BLK1	ND	ug/L	0.10	0.077	
Phenanthrene	BYH1030-BLK1	ND	ug/L	0.10	0.022	
Pyrene	BYH1030-BLK1	ND	ug/L	0.10	0.022	
Nitrobenzene-d5 (Surrogate)	**BYH1030-BLK1**	**81.4**	%	**40 - 130 (LCL - UCL)**		
2-Fluorobiphenyl (Surrogate)	**BYH1030-BLK1**	**77.8**	%	**50 - 120 (LCL - UCL)**		
p-Terphenyl-d14 (Surrogate)	**BYH1030-BLK1**	**157**	%	**40 - 130 (LCL - UCL)**		**S09**

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Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYH1030										
Acenaphthene	BYH1030-BS1	LCS	0.95447	1.0000	ug/L	95.4		60 - 110		
Acenaphthylene	BYH1030-BS1	LCS	1.0915	1.0000	ug/L	109		60 - 120		
Anthracene	BYH1030-BS1	LCS	1.2833	1.0000	ug/L	128		60 - 130		
Benzo[a]anthracene	BYH1030-BS1	LCS	0.89920	1.0000	ug/L	89.9		60 - 130		
Benzo[b]fluoranthene	BYH1030-BS1	LCS	0.73772	1.0000	ug/L	73.8		50 - 130		
Benzo[k]fluoranthene	BYH1030-BS1	LCS	1.0571	1.0000	ug/L	106		60 - 120		
Benzo[a]pyrene	BYH1030-BS1	LCS	1.0327	1.0000	ug/L	103		60 - 120		
Benzo[g,h,i]perylene	BYH1030-BS1	LCS	0.91858	1.0000	ug/L	91.9		40 - 120		
Chrysene	BYH1030-BS1	LCS	0.82824	1.0000	ug/L	82.8		60 - 110		
Dibenzo[a,h]anthracene	BYH1030-BS1	LCS	0.66432	1.0000	ug/L	66.4		40 - 120		
Fluoranthene	BYH1030-BS1	LCS	0.96108	1.0000	ug/L	96.1		60 - 120		
Fluorene	BYH1030-BS1	LCS	1.0172	1.0000	ug/L	102		60 - 120		
Indeno[1,2,3-cd]pyrene	BYH1030-BS1	LCS	0.80023	1.0000	ug/L	80.0		40 - 130		
Naphthalene	BYH1030-BS1	LCS	0.90618	1.0000	ug/L	90.6		60 - 110		
Phenanthrene	BYH1030-BS1	LCS	0.95832	1.0000	ug/L	95.8		60 - 120		
Pyrene	BYH1030-BS1	LCS	2.0937	1.0000	ug/L	209		50 - 125		L01
Nitrobenzene-d5 (Surrogate)	BYH1030-BS1	LCS	3.3240	4.0000	ug/L	83.1		40 - 130		
2-Fluorobiphenyl (Surrogate)	BYH1030-BS1	LCS	3.4567	4.0000	ug/L	86.4		50 - 120		
p-Terphenyl-d14 (Surrogate)	BYH1030-BS1	LCS	7.1208	4.0000	ug/L	178		40 - 130		S09

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Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH1030	Used client sample: N										
Acenaphthene	MS	1516891-68	ND	0.73261	1.0000	ug/L		73.3		60 - 110	
	MSD	1516891-68	ND	0.87356	1.0000	ug/L	17.6	87.4	30	60 - 110	
Acenaphthylene	MS	1516891-68	ND	0.81748	1.0000	ug/L		81.7		60 - 120	
	MSD	1516891-68	ND	0.97180	1.0000	ug/L	17.3	97.2	30	60 - 120	
Anthracene	MS	1516891-68	ND	1.0014	1.0000	ug/L		100		60 - 130	
	MSD	1516891-68	ND	1.1779	1.0000	ug/L	16.2	118	30	60 - 130	
Benzo[a]anthracene	MS	1516891-68	ND	0.64157	1.0000	ug/L		64.2		60 - 120	
	MSD	1516891-68	ND	0.73110	1.0000	ug/L	13.0	73.1	30	60 - 120	
Benzo[b]fluoranthene	MS	1516891-68	ND	0.59754	1.0000	ug/L		59.8		50 - 130	
	MSD	1516891-68	ND	0.61847	1.0000	ug/L	3.4	61.8	30	50 - 130	
Benzo[k]fluoranthene	MS	1516891-68	ND	0.82157	1.0000	ug/L		82.2		60 - 120	
	MSD	1516891-68	ND	1.0155	1.0000	ug/L	21.1	102	30	60 - 120	
Benzo[a]pyrene	MS	1516891-68	ND	0.84489	1.0000	ug/L		84.5		60 - 120	
	MSD	1516891-68	ND	0.93215	1.0000	ug/L	9.8	93.2	30	60 - 120	
Benzo[g,h,i]perylene	MS	1516891-68	ND	0.69765	1.0000	ug/L		69.8		40 - 120	
	MSD	1516891-68	ND	0.87112	1.0000	ug/L	22.1	87.1	30	40 - 120	
Chrysene	MS	1516891-68	ND	0.65355	1.0000	ug/L		65.4		60 - 110	
	MSD	1516891-68	ND	0.75385	1.0000	ug/L	14.3	75.4	30	60 - 110	
Dibenzo[a,h]anthracene	MS	1516891-68	ND	0.53005	1.0000	ug/L		53.0		40 - 120	
	MSD	1516891-68	ND	0.62565	1.0000	ug/L	16.5	62.6	30	40 - 120	
Fluoranthene	MS	1516891-68	ND	0.72912	1.0000	ug/L		72.9		60 - 120	
	MSD	1516891-68	ND	0.83114	1.0000	ug/L	13.1	83.1	30	60 - 120	
Fluorene	MS	1516891-68	ND	0.80415	1.0000	ug/L		80.4		60 - 120	
	MSD	1516891-68	ND	0.98175	1.0000	ug/L	19.9	98.2	30	60 - 120	
Indeno[1,2,3-cd]pyrene	MS	1516891-68	ND	0.61415	1.0000	ug/L		61.4		40 - 130	
	MSD	1516891-68	ND	0.73932	1.0000	ug/L	18.5	73.9	30	40 - 130	
Naphthalene	MS	1516891-68	ND	0.70410	1.0000	ug/L		70.4		60 - 110	
	MSD	1516891-68	ND	0.84442	1.0000	ug/L	18.1	84.4	30	60 - 110	
Phenanthrene	MS	1516891-68	ND	0.71158	1.0000	ug/L		71.2		60 - 120	
	MSD	1516891-68	ND	0.85360	1.0000	ug/L	18.1	85.4	30	60 - 120	
Pyrene	MS	**1516891-68**	**ND**	**1.6614**	**1.0000**	**ug/L**		**166**		**50 - 125**	**Q03**
	MSD	**1516891-68**	**ND**	**2.1051**	**1.0000**	**ug/L**	**23.6**	**211**	**30**	**50 - 125**	**Q03**
Nitrobenzene-d5 (Surrogate)	MS	1516891-68	ND	2.6098	4.0000	ug/L		65.2		40 - 130	
	MSD	1516891-68	ND	3.1383	4.0000	ug/L	18.4	78.5		40 - 130	
2-Fluorobiphenyl (Surrogate)	MS	1516891-68	ND	2.5918	4.0000	ug/L		64.8		50 - 120	
	MSD	1516891-68	ND	3.0786	4.0000	ug/L	17.2	77.0		50 - 120	

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Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH1030	Used client sample: N										
p-Terphenyl-d14 (Surrogate)	MS	1516891-68	ND	5.7586	4.0000	ug/L		144		40 - 130	S09
	MSD	1516891-68	ND	7.3720	4.0000	ug/L	24.6	184		40 - 130	S09

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH0553						
Gasoline Range Organics (C4 - C12)	BYH0553-BLK1	ND	ug/L	50	8.8	
a,a,a-Trifluorotoluene (FID Surrogate)	**BYH0553-BLK1**	**93.8**	%	**70 - 130 (LCL - UCL)**		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYH0553										
Gasoline Range Organics (C4 - C12)	BYH0553-BS1	LCS	1147.3	1000.0	ug/L	115		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BYH0553-BS1	LCS	34.498	40.000	ug/L	86.2		70 - 130		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH0553	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1516891-22	ND	1077.2	1000.0	ug/L		108		70 - 130	
	MSD	1516891-22	ND	976.13	1000.0	ug/L	9.8	97.6	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1516891-22	ND	34.761	40.000	ug/L		86.9		70 - 130	
	MSD	1516891-22	ND	38.207	40.000	ug/L	9.4	95.5		70 - 130	

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Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH0882						
TPH - Gasoline	BYH0882-BLK1	ND	ug/L	500	200	
TPH - Diesel (FFP)	BYH0882-BLK1	ND	ug/L	200	34	
TPH - Motor Oil	BYH0882-BLK1	ND	ug/L	500	66	
Tetracosane (Surrogate)	**BYH0882-BLK1**	**84.5**	%	**37 - 134 (LCL - UCL)**		

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Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYH0882										
TPH - Diesel (FFP)	BYH0882-BS1	LCS	1914.6	2500.0	ug/L	76.6		52 - 128		
Tetracosane (Surrogate)	BYH0882-BS1	LCS	88.165	101.87	ug/L	86.5		37 - 134		

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Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH0882	Used client sample: N										
TPH - Diesel (FFP)	MS	1516891-51	ND	1861.2	2500.0	ug/L		74.4		50 - 127	
	MSD	1516891-51	ND	1952.1	2500.0	ug/L	4.8	78.1	24	50 - 127	
Tetracosane (Surrogate)	MS	1516891-51	ND	89.780	101.87	ug/L		88.1		37 - 134	
	MSD	1516891-51	ND	90.450	101.87	ug/L	0.7	88.8		37 - 134	

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Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH0169						
Bromide	BYH0169-BLK1	ND	mg/L	0.10	0.035	
Chloride	BYH0169-BLK1	ND	mg/L	0.50	0.061	
Nitrate as NO3	BYH0169-BLK1	ND	mg/L	0.44	0.078	
Sulfate	BYH0169-BLK1	ND	mg/L	1.0	0.10	
QC Batch ID: BYH0297						
Bicarbonate Alkalinity as CaCO3	BYH0297-BLK1	ND	mg/L	4.1	4.1	
Carbonate Alkalinity as CaCO3	BYH0297-BLK1	ND	mg/L	4.1	4.1	
Hydroxide Alkalinity as CaCO3	BYH0297-BLK1	ND	mg/L	4.1	4.1	
Total Alkalinity as CaCO3	BYH0297-BLK1	ND	mg/L	4.1	4.1	
QC Batch ID: BYH0419						
Total Dissolved Solids @ 180 C	BYH0419-BLK1	ND	mg/L	6.7	6.7	
QC Batch ID: BYH0471						
Total Calcium	**BYH0471-BLK1**	**0.021257**	**mg/L**	**0.10**	**0.015**	**J**
Total Magnesium	**BYH0471-BLK1**	**0.029459**	**mg/L**	**0.050**	**0.019**	**J**
Total Sodium	BYH0471-BLK1	ND	mg/L	0.50	0.051	
Total Potassium	BYH0471-BLK1	ND	mg/L	1.0	0.13	

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Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYH0169										
Bromide	BYH0169-BS1	LCS	2.0770	2.0000	mg/L	104		90 - 110		
Chloride	BYH0169-BS1	LCS	51.563	50.000	mg/L	103		90 - 110		
Nitrate as NO3	BYH0169-BS1	LCS	22.448	22.134	mg/L	101		90 - 110		
Sulfate	BYH0169-BS1	LCS	102.02	100.00	mg/L	102		90 - 110		
QC Batch ID: BYH0297										
Total Alkalinity as CaCO3	BYH0297-BS3	LCS	104.82	100.00	mg/L	105		90 - 110		
QC Batch ID: BYH0419										
Total Dissolved Solids @ 180 C	BYH0419-BS1	LCS	575.00	586.00	mg/L	98.1		90 - 110		
QC Batch ID: BYH0471										
Total Calcium	BYH0471-BS1	LCS	10.928	10.000	mg/L	109		85 - 115		
Total Magnesium	BYH0471-BS1	LCS	9.8502	10.000	mg/L	98.5		85 - 115		
Total Sodium	BYH0471-BS1	LCS	10.150	10.000	mg/L	101		85 - 115		
Total Potassium	BYH0471-BS1	LCS	9.9637	10.000	mg/L	99.6		85 - 115		

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Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH0169	Used client sample: N										
Bromide	DUP	1518824-01	0.29100	0.29100		mg/L	0		10		
	MS	1518824-01	0.29100	2.3697	2.0202	mg/L		103		80 - 120	
	MSD	1518824-01	0.29100	2.3768	2.0202	mg/L	0.3	103	10	80 - 120	
Chloride	DUP	1518824-01	32.768	32.666		mg/L	0.3		10		
	MS	1518824-01	32.768	88.081	50.505	mg/L		110		80 - 120	
	MSD	1518824-01	32.768	88.181	50.505	mg/L	0.1	110	10	80 - 120	
Nitrate as NO3	DUP	1518824-01	24.272	24.259		mg/L	0.1		10		
	MS	1518824-01	24.272	48.073	22.358	mg/L		106		80 - 120	
	MSD	1518824-01	24.272	48.194	22.358	mg/L	0.3	107	10	80 - 120	
Sulfate	DUP	1518824-01	49.735	49.634		mg/L	0.2		10		
	MS	1518824-01	49.735	161.37	101.01	mg/L		111		80 - 120	
	MSD	1518824-01	49.735	161.57	101.01	mg/L	0.1	111	10	80 - 120	
QC Batch ID: BYH0297	Used client sample: N										
Bicarbonate Alkalinity as CaCO3	DUP	1518795-03	621.61	624.66		mg/L	0.5		10		
Carbonate Alkalinity as CaCO3	DUP	1518795-03	ND	ND		mg/L			10		
Hydroxide Alkalinity as CaCO3	DUP	1518795-03	ND	ND		mg/L			10		
Total Alkalinity as CaCO3	DUP	1518795-03	621.61	624.66		mg/L	0.5		10		
QC Batch ID: BYH0419	Used client sample: N										
Total Dissolved Solids @ 180 C	DUP	1519002-01	693.33	699.99		mg/L	1.0		10		
QC Batch ID: BYH0471	Used client sample: N										
Total Calcium	DUP	**1518931-03**	**63.036**	**62.066**		**mg/L**	**1.6**		**20**		
	MS	**1518931-03**	**63.036**	**70.140**	**10.000**	**mg/L**		**71.0**		**75 - 125**	**A03**
	MSD	**1518931-03**	**63.036**	**73.487**	**10.000**	**mg/L**	**4.7**	**105**	**20**	**75 - 125**	
Total Magnesium	DUP	1518931-03	28.416	25.785		mg/L	9.7		20		
	MS	1518931-03	28.416	37.117	10.000	mg/L		87.0		75 - 125	
	MSD	1518931-03	28.416	38.978	10.000	mg/L	4.9	106	20	75 - 125	
Total Sodium	DUP	1518931-03	25.604	25.028		mg/L	2.3		20		
	MS	1518931-03	25.604	35.139	10.000	mg/L		95.3		75 - 125	
	MSD	1518931-03	25.604	36.711	10.000	mg/L	4.4	111	20	75 - 125	
Total Potassium	DUP	1518931-03	4.1608	4.1145		mg/L	1.1		20		
	MS	1518931-03	4.1608	15.028	10.000	mg/L		109		75 - 125	
	MSD	1518931-03	4.1608	15.632	10.000	mg/L	3.9	115	20	75 - 125	

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Metals Analysis

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BYH0355						
Hexavalent Chromium	BYH0355-BLK1	ND	ug/L	2.0	0.70	
QC Batch ID: BYH0461						
Total Recoverable Uranium	BYH0461-BLK1	ND	pCi/L	0.67	0.067	
Total Recoverable Uranium	BYH0461-BLK1	ND	ug/L	1.0	0.10	
QC Batch ID: BYH0471						
Total Antimony	BYH0471-BLK1	ND	ug/L	100	8.5	
Total Arsenic	BYH0471-BLK1	ND	ug/L	50	7.8	
Total Barium	BYH0471-BLK1	ND	ug/L	10	3.5	
Total Beryllium	BYH0471-BLK1	ND	ug/L	10	0.50	
Total Boron	**BYH0471-BLK1**	**0.031009**	**mg/L**	**0.10**	**0.013**	**J**
Total Cadmium	BYH0471-BLK1	ND	ug/L	10	1.1	
Total Chromium	BYH0471-BLK1	ND	ug/L	10	1.1	
Total Cobalt	BYH0471-BLK1	ND	ug/L	50	1.3	
Total Copper	BYH0471-BLK1	ND	ug/L	10	1.1	
Total Iron	BYH0471-BLK1	ND	mg/L	0.050	0.030	
Total Lead	BYH0471-BLK1	ND	ug/L	50	4.0	
Total Lithium	BYH0471-BLK1	ND	mg/L	0.020	0.0062	
Total Manganese	BYH0471-BLK1	ND	mg/L	0.010	0.0040	
Total Molybdenum	BYH0471-BLK1	ND	ug/L	50	1.2	
Total Nickel	BYH0471-BLK1	ND	ug/L	10	2.0	
Total Selenium	BYH0471-BLK1	ND	ug/L	100	15	
Total Silver	BYH0471-BLK1	ND	ug/L	10	1.9	
Total Strontium	BYH0471-BLK1	ND	mg/L	0.010	0.0010	
Total Thallium	BYH0471-BLK1	ND	ug/L	100	24	
Total Vanadium	BYH0471-BLK1	ND	ug/L	10	2.2	
Total Zinc	BYH0471-BLK1	ND	ug/L	50	2.3	
QC Batch ID: BYH0541						
Total Mercury	BYH0541-BLK1	ND	ug/L	0.20	0.033	

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Metals Analysis

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BYH0355										
Hexavalent Chromium	BYH0355-BS1	LCS	50.394	50.000	ug/L	101		85 - 115		
QC Batch ID: BYH0461										
Total Recoverable Uranium	BYH0461-BS1	LCS	28.195	26.800	pCi/L	105		85 - 115		
Total Recoverable Uranium	BYH0461-BS1	LCS	42.082	40.000	ug/L	105		85 - 115		
QC Batch ID: BYH0471										
Total Antimony	BYH0471-BS1	LCS	392.44	400.00	ug/L	98.1		85 - 115		
Total Arsenic	BYH0471-BS1	LCS	187.40	200.00	ug/L	93.7		85 - 115		
Total Barium	BYH0471-BS1	LCS	408.86	400.00	ug/L	102		85 - 115		
Total Beryllium	BYH0471-BS1	LCS	187.15	200.00	ug/L	93.6		85 - 115		
Total Boron	BYH0471-BS1	LCS	0.95459	1.0000	mg/L	95.5		85 - 115		
Total Cadmium	BYH0471-BS1	LCS	193.48	200.00	ug/L	96.7		85 - 115		
Total Chromium	BYH0471-BS1	LCS	194.03	200.00	ug/L	97.0		85 - 115		
Total Cobalt	BYH0471-BS1	LCS	194.00	200.00	ug/L	97.0		85 - 115		
Total Copper	BYH0471-BS1	LCS	360.03	400.00	ug/L	90.0		85 - 115		
Total Iron	BYH0471-BS1	LCS	1.0448	1.0000	mg/L	104		85 - 115		
Total Lead	BYH0471-BS1	LCS	394.59	400.00	ug/L	98.6		85 - 115		
Total Lithium	BYH0471-BS1	LCS	0.20163	0.20000	mg/L	101		85 - 115		
Total Manganese	BYH0471-BS1	LCS	0.48473	0.50000	mg/L	96.9		85 - 115		
Total Molybdenum	BYH0471-BS1	LCS	198.02	200.00	ug/L	99.0		85 - 115		
Total Nickel	BYH0471-BS1	LCS	391.01	400.00	ug/L	97.8		85 - 115		
Total Selenium	BYH0471-BS1	LCS	199.63	200.00	ug/L	99.8		85 - 115		
Total Silver	BYH0471-BS1	LCS	91.312	100.00	ug/L	91.3		85 - 115		
Total Strontium	BYH0471-BS1	LCS	0.51324	0.50000	mg/L	103		85 - 115		
Total Thallium	BYH0471-BS1	LCS	407.00	400.00	ug/L	102		85 - 115		
Total Vanadium	BYH0471-BS1	LCS	196.37	200.00	ug/L	98.2		85 - 115		
Total Zinc	BYH0471-BS1	LCS	468.65	500.00	ug/L	93.7		85 - 115		
QC Batch ID: BYH0541										
Total Mercury	BYH0541-BS1	LCS	1.0175	1.0000	ug/L	102		85 - 115		

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH0355	Used client sample: N										
Hexavalent Chromium	DUP	1518832-01	ND	ND		ug/L			10		
	MS	1518832-01	ND	52.412	52.632	ug/L		99.6		85 - 115	
	MSD	1518832-01	ND	51.061	52.632	ug/L	2.6	97.0	10	85 - 115	
QC Batch ID: BYH0461	Used client sample: N										
Total Recoverable Uranium	DUP	1519038-01	1.2060	1.1926		pCi/L	1.1		20		
	MS	1519038-01	1.2060	33.081	26.800	pCi/L		119		70 - 130	
	MSD	1519038-01	1.2060	33.955	26.800	pCi/L	2.6	122	20	70 - 130	
Total Recoverable Uranium	DUP	1519038-01	1.8000	1.7800		ug/L	1.1		20		
	MS	1519038-01	1.8000	49.375	40.000	ug/L		119		70 - 130	
	MSD	1519038-01	1.8000	50.679	40.000	ug/L	2.6	122	20	70 - 130	
QC Batch ID: BYH0471	Used client sample: N										
Total Antimony	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	430.97	400.00	ug/L		108		75 - 125	
	MSD	1518931-03	ND	447.36	400.00	ug/L	3.7	112	20	75 - 125	
Total Arsenic	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	202.90	200.00	ug/L		101		75 - 125	
	MSD	1518931-03	ND	224.92	200.00	ug/L	10.3	112	20	75 - 125	
Total Barium	DUP	1518931-03	155.62	151.25		ug/L	2.8		20		
	MS	1518931-03	155.62	595.00	400.00	ug/L		110		75 - 125	
	MSD	1518931-03	155.62	628.92	400.00	ug/L	5.5	118	20	75 - 125	
Total Beryllium	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	209.22	200.00	ug/L		105		75 - 125	
	MSD	1518931-03	ND	220.14	200.00	ug/L	5.1	110	20	75 - 125	
Total Boron	DUP	**1518931-03**	**0.067366**	**0.051226**		**mg/L**	**27.2**		**20**		**J,A02**
	MS	**1518931-03**	**0.067366**	**1.0697**	**1.0000**	**mg/L**		**100**		**75 - 125**	
	MSD	**1518931-03**	**0.067366**	**1.1223**	**1.0000**	**mg/L**	**4.8**	**105**	**20**	**75 - 125**	
Total Cadmium	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	209.91	200.00	ug/L		105		75 - 125	
	MSD	1518931-03	ND	224.44	200.00	ug/L	6.7	112	20	75 - 125	
Total Chromium	DUP	1518931-03	9.6430	9.6365		ug/L	0.1		20		J
	MS	1518931-03	9.6430	219.48	200.00	ug/L		105		75 - 125	
	MSD	1518931-03	9.6430	230.23	200.00	ug/L	4.8	110	20	75 - 125	
Total Cobalt	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	204.50	200.00	ug/L		102		75 - 125	
	MSD	1518931-03	ND	217.22	200.00	ug/L	6.0	109	20	75 - 125	
Total Copper	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	379.25	400.00	ug/L		94.8		75 - 125	
	MSD	1518931-03	ND	400.67	400.00	ug/L	5.5	100	20	75 - 125	

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH0471	Used client sample: N										
Total Iron	DUP	1518931-03	ND	ND		mg/L			20		
	MS	1518931-03	ND	1.1543	1.0000	mg/L		115		75 - 125	
	MSD	1518931-03	ND	1.2056	1.0000	mg/L	4.3	121	20	75 - 125	
Total Lead	DUP	1518931-03	4.2438	ND		ug/L			20		
	MS	1518931-03	4.2438	426.00	400.00	ug/L		105		75 - 125	
	MSD	1518931-03	4.2438	452.34	400.00	ug/L	6.0	112	20	75 - 125	
Total Lithium	DUP	1518931-03	ND	0.0080212		mg/L			20		J
	MS	1518931-03	ND	0.23276	0.20000	mg/L		116		75 - 125	
	MSD	1518931-03	ND	0.24353	0.20000	mg/L	4.5	122	20	75 - 125	
Total Manganese	DUP	1518931-03	ND	ND		mg/L			20		
	MS	1518931-03	ND	0.52938	0.50000	mg/L		106		75 - 125	
	MSD	1518931-03	ND	0.55770	0.50000	mg/L	5.2	112	20	75 - 125	
Total Molybdenum	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	214.25	200.00	ug/L		107		75 - 125	
	MSD	1518931-03	ND	229.71	200.00	ug/L	7.0	115	20	75 - 125	
Total Nickel	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	413.66	400.00	ug/L		103		75 - 125	
	MSD	1518931-03	ND	432.40	400.00	ug/L	4.4	108	20	75 - 125	
Total Selenium	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	218.91	200.00	ug/L		109		75 - 125	
	MSD	1518931-03	ND	244.97	200.00	ug/L	11.2	122	20	75 - 125	
Total Silver	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	101.89	100.00	ug/L		102		75 - 125	
	MSD	1518931-03	ND	106.48	100.00	ug/L	4.4	106	20	75 - 125	
Total Strontium	DUP	1518931-03	0.86513	0.84681		mg/L	2.1		20		
	MS	1518931-03	0.86513	1.3629	0.50000	mg/L		99.6		75 - 125	
	MSD	1518931-03	0.86513	1.4302	0.50000	mg/L	4.8	113	20	75 - 125	
Total Thallium	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	429.67	400.00	ug/L		107		75 - 125	
	MSD	1518931-03	ND	461.58	400.00	ug/L	7.2	115	20	75 - 125	
Total Vanadium	DUP	1518931-03	19.089	18.665		ug/L	2.2		20		
	MS	1518931-03	19.089	234.50	200.00	ug/L		108		75 - 125	
	MSD	1518931-03	19.089	245.66	200.00	ug/L	4.6	113	20	75 - 125	
Total Zinc	DUP	1518931-03	ND	ND		ug/L			20		
	MS	1518931-03	ND	492.08	500.00	ug/L		98.4		75 - 125	
	MSD	1518931-03	ND	517.62	500.00	ug/L	5.1	104	20	75 - 125	
QC Batch ID: BYH0541	Used client sample: N										

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Metals Analysis

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BYH0541	Used client sample: N										
Total Mercury	DUP	1519108-01	0.052500	ND		ug/L			20		
	MS	1519108-01	0.052500	0.99000	1.0000	ug/L		93.8		70 - 130	
	MSD	1519108-01	0.052500	0.93250	1.0000	ug/L	6.0	88.0	20	70 - 130	

BSK Associates Fresno
1414 Stanislaus St
Fresno, CA93706
559-497-2888 (Main)
559-485-6935 (FAX)

A5H0422
8/17/2015
Invoice: A517160

Kerrie Vaughan
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308

RE: Report for A5H0422 General: Project Manager-Kerrie Vaughan

Dear Kerrie Vaughan,

Thank you for using BSK Associates for your analytical testing needs. In the following pages, you will find the test results for the samples submitted to our laboratory on 8/5/2015. The results have been approved for release by our Laboratory Director as indicated by the authorizing signature below.

The samples were analyzed for the test(s) indicated on the Chain of Custody (see attached) and the results relate only to the samples analyzed. BSK certifies that the testing was performed in accordance with the quality system requirements specified in the 2009 TNI Standard. Any deviations from this standard or from the method requirements for each test procedure performed will be annotated alongside the analytical result or noted in the Case Narrative. Unless otherwise noted, the sample results are reported on an "as received" basis.

If additional clarification of any information is required, please contact your Project Manager, Stephane Maupas , at (800) 877-8310 or (559) 497-2888 x212.

Thanks again for using BSK Associates. We value your business and appreciate your loyalty.

Sincerely,

Kijuana Hartshorn, Project Coordinator

Accredited in Accordance with NELAP
ORELAP #4021

BSK Associates Engineers & Laboratories

A5H0422

General: Project Manager-Kerrie Vaughan

Case Narrative

Project and Report Details		Invoice Details	
Client:	BC Laboratories	**Invoice To:**	BC Laboratories
Report To:	Kerrie Vaughan	**Invoice Attn:**	Kerrie Vaughan
Project #:	1518827	**Project PO#:**	-
Received:	8/05/2015 - 17:23		
Report Due:	8/17/2015		

Sample Receipt Conditions

Cooler: Default Cooler
Temperature on Receipt °C: 4.6

Containers Intact
COC/Labels Agree
Received On Wet Ice
Packing Material - Bubble Wrap
Sample(s) were received in temperature range.
Initial receipt at BSK-FAL

Data Qualifiers

The following qualifiers have been applied to one or more analytical results:

MS1.0 Matrix spike recoveries exceed control limits.

Report Distribution

Recipient(s)	Report Format	CC:
Kerrie Vaughan	FINAL.RPT	

BSK Associates Engineers & Laboratories

A5H0422

General: Project Manager-Kerrie Vaughan

1518827

Certificate of Analysis

Sample ID: A5H0422-01
Sampled By: Client
Sample Description: 1518827-01

Sample Date - Time: 08/03/15 - 10:05
Matrix: Water
Sample Type: Grab

BSK Associates Fresno

Radiological

Analyte	Method	Result	Units	Batch	Prepared	Analyzed	Qual
Gross Alpha	SM 7110C	ND	pCi/L	A509057	08/11/15	08/12/15	
1.65 Sigma Uncertainty		**0.110**	±				
MDA95		**1200**	pCi/L				

A5H0422 FINAL 08172015 1154
Printed: 8/17/2015
QA-RP-0001-10 Final.rpt

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BSK Associates Engineers & Laboratories

A5H0422

General: Project Manager-Kerrie Vaughan

1518827

Certificate of Analysis

Sample ID: A5H0422-02
Sampled By: Client
Sample Description: 1518827-02

Sample Date - Time: 08/03/15 - 10:35
Matrix: Water
Sample Type: Grab

BSK Associates Fresno

Radiological

Analyte	Method	Result	Units	Batch	Prepared	Analyzed	Qual
Gross Alpha	SM 7110C	ND	pCi/L	A509057	08/11/15	08/12/15	
1.65 Sigma Uncertainty		**0.191**	±				
MDA95		**1200**	pCi/L				

A5H0422 FINAL 08172015 1154
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Page 4 of 9

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A5H0422

General: Project Manager-Kerrie Vaughan

BSK Associates Fresno

Radiological Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
SM 7110C - Quality Control											
Batch: A509057										Prepared: 8/11/2015	
Prep Method: EPA 00-02										Analyst: SAB	
Blank (A509057-BLK1)											
1.65 Sigma Uncertainty	ND		±							08/12/15	
Gross Alpha	ND	3	pCi/L							08/12/15	
MDA95	ND	0.00	pCi/L							08/12/15	
Blank Spike (A509057-BS1)											
Gross Alpha	27.3	3	pCi/L	30		91	80-120			08/12/15	
Blank Spike Dup (A509057-BSD1)											
Gross Alpha	26.6	3	pCi/L	30		89	80-120	3	50	08/12/15	
Matrix Spike (A509057-MS1), Source: A5H0189-01											
Gross Alpha	56.2	3	pCi/L	120	ND	45	70-130			08/12/15	MS1.0 ***Low***
Matrix Spike (A509057-MS2), Source: A5H0288-01											
Gross Alpha	89.9	3	pCi/L	120	ND	75	70-130			08/12/15	
Matrix Spike Dup (A509057-MSD1), Source: A5H0189-01											
Gross Alpha	69.5	3	pCi/L	120	ND	56	70-130	21	50	08/12/15	MS1.0 ***Low***
Matrix Spike Dup (A509057-MSD2), Source: A5H0288-01											
Gross Alpha	88.9	3	pCi/L	120	ND	74	70-130	1	50	08/12/15	

BSK Associates Engineers & Laboratories

A5H0422

General: Project Manager-Kerrie Vaughan

Certificate of Analysis

Notes:

- The Chain of Custody document and Sample Integrity Sheet are part of the analytical report.
- Any remaining sample(s) for testing will be disposed of according to BSK's sample retention policy unless other arrangements are made in advance.
- All positive results for EPA Methods 504.1 and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed.
- Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.
- J-value is equivalent to DNQ (Detected, not quantified) which is a trace value. A trace value is an analyte detected between the MDL and the laboratory reporting limit. This result is of an unknown data quality and is only qualitative (estimated). Baseline noise, calibration curve extrapolation below the lowest calibrator, method blank detections, and integration artifacts can all produce apparent DNQ values, which contribute to the un-reliability of these values.
- (1) - Residual chlorine and pH analysis have a 15 minute holding time for both drinking and waste water samples as defined by the EPA and 40 CFR 136. Waste water and ground water (monitoring well) samples must be field filtered to meet the 15 minute holding time for dissolved metals.
- Summations of analytes (i.e. Total Trihalomethanes) may appear to add individual amounts incorrectly, due to rounding of analyte values occurring before or after the total value is calculated, as well as rounding of the total value.
- RL Multiplier is the factor used to adjust the reporting limit (RL) due to variations in sample preparation procedures and dilutions required for matrix interferences.
- Due to the subjective nature of the Threshold Odor Method, all characterizations of the detected odor are the opinion of the panel of analysts. The characterizations can be found in Standard Methods 2170B Figure 2170:1.
- The MCLs provided in this report (if applicable) represent the primary MCLs for that analyte.

Definitions

mg/L:	Milligrams/Liter (ppm)	MDL:	Method Detection Limit	MDA95:	Min. Detected Activity
mg/Kg:	Milligrams/Kilogram (ppm)	RL:	Reporting Limit: DL x Dilution	MPN:	Most Probable Number
µg/L:	Micrograms/Liter (ppb)	ND:	None Detected at RL	CFU:	Colony Forming Unit
µg/Kg:	Micrograms/Kilogram (ppb)	pCi/L:	Picocuries per Liter	Absent:	Less than 1 CFU/100mLs
%:	Percent Recovered (surrogates)	RL Mult:	RL Multiplier	Present:	1 or more CFU/100mLs
NR:	Non-Reportable	MCL:	Maximum Contaminant Limit		

Please see the individual Subcontract Lab's report for applicable certifications.

BSK is not accredited under the NELAC program for the following parameters: **NA**

Certifications: **Please refer to our website for a copy of our Accredited Fields of Testing under each certification.**

Fresno

State of California - ELAP	1180	State of Hawaii	4021
State of Nevada	CA000792016-1	State of Oregon - NELAC	4021
EPA - UCMR3	CA00079	State of Washington	C997-15

Sacramento

State of California - ELAP	2435

Vancouver

State of Oregon - NELAC	WA100008	State of Washington	C824-14a

A5H0422

08052015

BCLab4911

Turnaround: Standard
Due Date: 8/17/2015

BC Laboratories

Printed: 8/5/2015 5:47:04PM
Page 7 of 9

4.4

SUBCONTRACT ORDER
BC Laboratories
1518827

A5H0422 08/05/2015
BCLab4911 8

BSKSA

SENDING LABORATORY:
BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911
FAX: 661-327-1918
Project Manager: Kerrie Vaughan

RECEIVING LABORATORY:
BSK Analytical Labs
1414 Stanislaus Street
Fresno, CA 93706
Phone: (800) 877-8310
FAX: (559) 485-6935

Analysis	Due	Expires	Comments
Sample ID: 1518827-01	**Water**	**Sampled: 08/03/15 10:05**	
EPA 900.0 Gross Alpha	08/17/15 17:00	01/31/16 10:05	Analyze water phase only results neede by 8/17/2015.
Containers supplied: 1-1 liter PE (Red)			
Sample ID: 1518827-02	**Water**	**Sampled: 08/03/15 10:35**	
EPA 900.0 Gross Alpha	08/17/15 17:00	01/31/16 10:35	Analyze water phase only results neede by 8/17/2015.
Containers supplied: F, F			

Released By	8-5-15 Date	Received By	8-5-15 Date
Released By	8-5-15 Date	Received By	8/5/15 1544 Date

Rush 1 hour DMS

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A5H0422 08/05/2015
BCLab4911 8

Label

BSK Associates SR-FL-0002-14

Sample Integrity

BSK Bottles: Yes (No) Page 1 of 1

COC Info

Was temperature within range? Chemistry ≤ 6°C Micro < 10°C	Yes (No) NA	Were correct containers and preservatives received for the tests requested?	(Yes) No NA
If samples were taken today, is there evidence that chilling has begun?	Yes (No) NA	Were there bubbles in the VOA vials? (Volatiles Only)	Yes No (NA)
Did all bottles arrive unbroken and intact?	(Yes) No	Was a sufficient amount of sample received?	(Yes) No
Did all bottle labels agree with COC?	(Yes) No	Do samples have a hold time <72 hours?	Yes (No)
Was sodium thiosulfate added to CN sample(s) until chlorine was no longer present?	Yes No (NA)	Was PM notified of discrepancies? PM: 1-2 By/Time:	Yes No (NA)

Bottles Received "—" means preservation/chlorine checks are either N/A or are performed in the lab

250ml(A) 500ml(B) 1Liter(C) 40ml VOA(V)	Checks	Passed?
Bacti $Na_2S_2O_3$	—	—
None (P) White Cap	—	—
Cr6 (P) Br. Green Label NH4OH(NH4)2SO4 **DW**	Cl, pH > 8	Y N
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **WW**	pH 9.3-9.7	Y N
Cr6 (P) Pink Label NH4OH(NH4)2SO4 **7199** ***24 HOUR HOLD TIME***	pH 9.0-9.5	Y N
HNO_3 (P) Red Cap	—	—
H_2SO_4 (P) or (AG) Yellow Cap/Label	pH < 2	Y N
NaOH (P) Green Cap	Cl, pH >10	Y N
NaOH + ZnAc (P)	pH > 9	Y N
Dissolved Oxygen 300ml (g)	—	—
None (AG) 608/8081/8082, 625, 632/8321, 8151, 8270	—	—
HCl (AG) Lt. Blue Label O&G, Diesel	—	—
Na_2O_3S+HCl (AG) Lt. Pink Label 525	—	—
$Na_2S_2O_3$ 1 Liter (Brown P) 549	—	—
$Na_2S_2O_3$ (AG) Blue Label 547,515,548,THM,524	—	—
$Na_2S_2O_3$ (CG) Blue Label 504, 505	—	—
$Na_2S_2O_3$ + MCAA (CG) Orange Label 531	pH < 3	Y N
NH_4Cl (AG) Purple Label 552	—	—
EDA (AG) Brown Label DBPs	—	—
HCL (CG) 524.2,BTEX,Gas, MTBE, 8260/624	—	—
Buffer pH 4 (CG)	—	—
None (CG)	—	—
H_3PO_4 (CG) Salmon Label	—	—
Other:		
Asbestos 1Liter Plastic w/ Foil	—	—
Low Level Hg / Metals Double Baggie	—	—
Bottled Water	—	—
Clear Glass Jar: 250 / 500 / 1 Liter	—	—
Soil Tube Brass / Steel / Plastic	—	—
Tedlar Bag / Plastic Bag	—	—

8/5/15

Split

	Container	Preservative	Date/Time/Initials		Container	Preservative	Date/Time/Initials
S P				S P			
S P				S P			

Comments

Labeled by: NR @1744 Labels checked by: JH @ 17:59 RUSH Paged by:_____@_____

Page 9 of 9

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

August 25, 2015

Ms. Kerrie Vaughan
BC Laboratories
4100 Atlas Ct.
Bakersfield, CA 93308

RE: Project: 1518827
Pace Project No.: 30156088

Dear Ms. Vaughan:
Enclosed are the analytical results for sample(s) received by the laboratory on August 12, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carin A. Ferris

Carin Ferris
carin.ferris@pacelabs.com
Project Manager

Enclosures

NELAP ACCREDITED TNI LABORATORY

REPORT OF LABORATORY ANALYSIS

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www.pacelabs.com

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1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

CERTIFICATIONS

Project: 1518827
Pace Project No.: 30156088

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: 1518827
Pace Project No.: 30156088

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30156088001	**1518827-01**	Water	08/03/15 10:05	08/12/15 10:10
30156088002	**1518827-02**	Water	08/03/15 10:35	08/12/15 10:10

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Greensburg, PA 15601
(724)850-5600

SAMPLE ANALYTE COUNT

Project: 1518827
Pace Project No.: 30156088

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30156088001	**1518827-01**	EPA 903.1	JC2	1
		EPA 904.0	JLW	1
30156088002	**1518827-02**	EPA 903.1	JC2	1
		EPA 904.0	JLW	1

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Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 1518827
Pace Project No.: 30156088

Method: **EPA 903.1**
Description: 903.1 Radium 226
Client: BC Laboratories
Date: August 25, 2015

General Information:
2 samples were analyzed for EPA 903.1. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

PROJECT NARRATIVE

Project: 1518827
Pace Project No.: 30156088

Method: **EPA 904.0**
Description: 904.0 Radium 228
Client: BC Laboratories
Date: August 25, 2015

General Information:
2 samples were analyzed for EPA 904.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 1518827
Pace Project No.: 30156088

Sample: 1518827-01 **Lab ID: 30156088001** Collected: 08/03/15 10:05 Received: 08/12/15 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**24.5 ± 14.5 (17.1) C:NA T:87%**	pCi/L	08/24/15 09:24	13982-63-3	
Radium-228	EPA 904.0	**8.27 ± 8.21 (17.0) C:84% T:65%**	pCi/L	08/24/15 18:34	15262-20-1	

Sample: 1518827-02 **Lab ID: 30156088002** Collected: 08/03/15 10:35 Received: 08/12/15 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**12.3 ± 9.43 (11.9) C:NA T:89%**	pCi/L	08/24/15 09:29	13982-63-3	
Radium-228	EPA 904.0	**9.04 ± 8.05 (16.4) C:79% T:72%**	pCi/L	08/24/15 18:35	15262-20-1	

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 1518827
Pace Project No.: 30156088

QC Batch:	RADC/25656	Analysis Method:	EPA 903.1
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radium-226

Associated Lab Samples: 30156088001, 30156088002

METHOD BLANK: 938614 Matrix: Water

Associated Lab Samples: 30156088001, 30156088002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0731 ± 0.379 (0.787) C:NA T:90%	pCi/L	08/24/15 09:18	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL - RADIOCHEMISTRY

Project: 1518827
Pace Project No.: 30156088

QC Batch:	RADC/25659	Analysis Method:	EPA 904.0
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228

Associated Lab Samples: 30156088001, 30156088002

METHOD BLANK: 938617 Matrix: Water

Associated Lab Samples: 30156088001, 30156088002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.381 ± 0.325 (0.654) C:86% T:91%	pCi/L	08/24/15 18:34	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
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Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 1518827
Pace Project No.: 30156088

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

SUBCONTRACT ORDER
BC Laboratories
1518827

SENDING LABORATORY:

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911
FAX: 661-327-1918
Project Manager: Kerrie Vaughan

RECEIVING LABORATORY: PACEA

PACE Analytical
1638 Roseytown Road, Ste 2,3 &4
Greensburg, PA 15601
Phone: (724) 850-5600
FAX: (724) 850-5601

30156088

Analysis	Due	Expires	Comments
Sample ID: 1518827-01 **Water**	**Sampled: 08/03/15 10:05**		001
EPA 903.1 Radium 226	08/17/15 17:00	01/31/16 10:05	Analyze water phase only results neede by 8/17/2015.
EPA 904.0 Radium 228	08/17/15 17:00	01/31/16 10:05	Analyze water phase only results neede by 8/17/2015.
Containers supplied: 2- 1 Liter PE (Red)			
Sample ID: 1518827-02 **Water**	**Sampled: 08/03/15 10:35**		002
EPA 903.1 Radium 226	08/17/15 17:00	01/31/16 10:35	Analyze water phase only results neede by 8/17/2015.
EPA 904.0 Radium 228	08/17/15 17:00	01/31/16 10:35	Analyze water phase only results neede by 8/17/2015.
Containers supplied: G, G			

Released By	Date	Received By	Date
[signature]	8.6.15	Alma R. Mahoney/Pace	8/12/15 1010
Released By	Date	Received By	Date

Page 11 of 13

PACEA

Page 1 of 1

Sample Condition Upon Receipt

Pace Analytical

Client Name: BC

Project # 30156088

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 1Z9165376803625446 77

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no **Biological Tissue is Frozen:** Yes No

Packing Material: Bubble Wrap ✓ Bubble Bags ___ None ___ Other _____

Thermometer Used N/A **Type of Ice:** Wet Blue (None) ☐ Samples on Ice, cooling process has begun

Cooler Temp.: Observed Temp.: _____ °C **Correction Factor:** _____ °C **Final Temp:** — °C

Date and initials of person examining contents: AM 8/12/15

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8. Low volume
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12. No date time on sample bottles
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	13. Added 2 1mL HNO3 to each sample
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	bottle. pH<2. ARM. 8/12/15 1105
exceptions: VOA, coliform, TOC, O&G, Phenols	☐Yes ☑No	Initial when completed ARM Lot # of added preservative DL15-0641
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

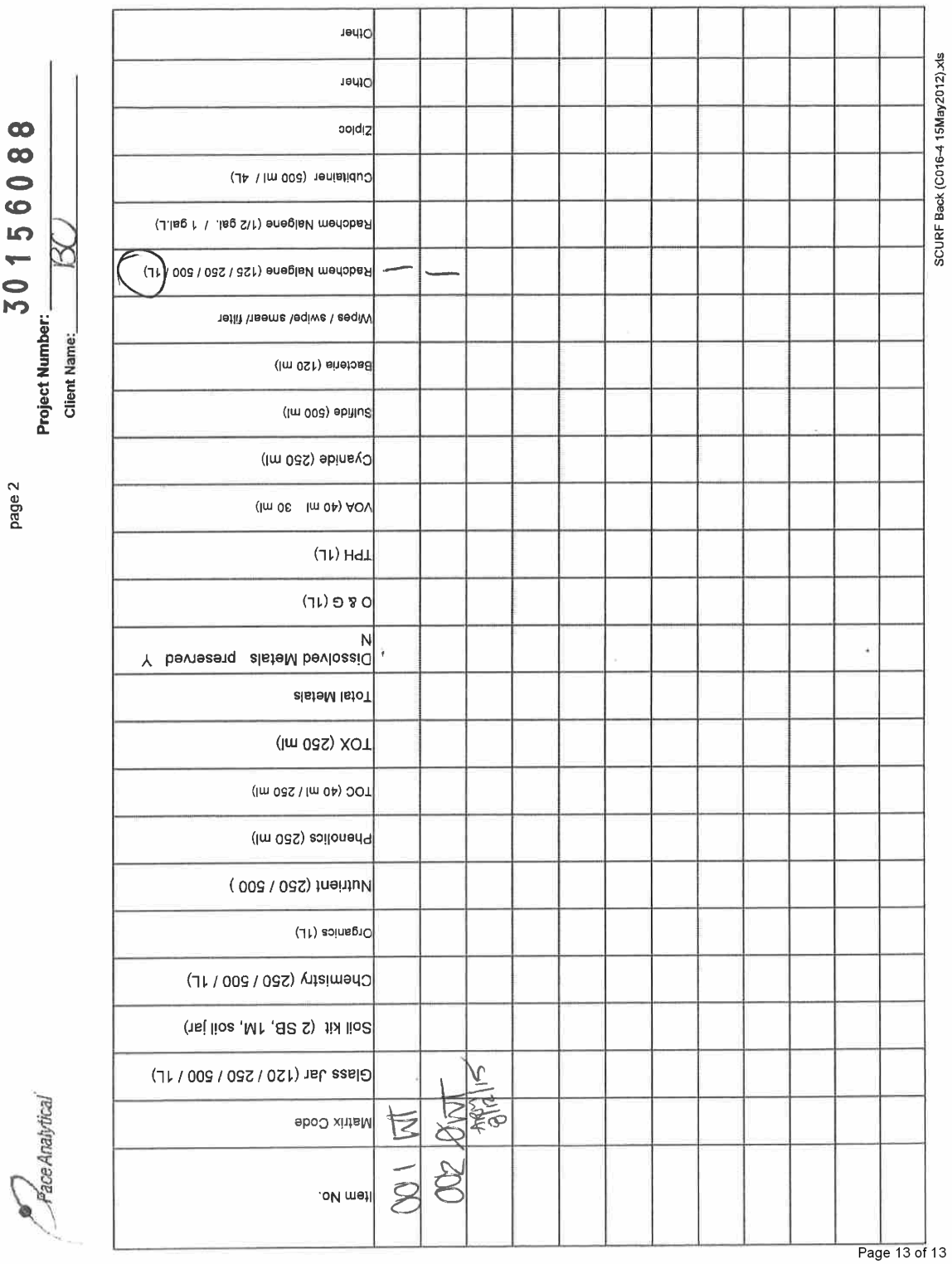
Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Carrie Jerris **Date:** 8/12/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

J:\QAQC\Master\Document Management\Sample Mgt\SCURF\FALLC003-09 SCUR Front 3.0.doc 12/15/2015 Page 12 of 13


Pace Analytical
page 2
Project Number: 30156088
Client Name: BC
Item No.
Matrix Code
Glass Jar (120 / 250 / 500 / 1L)
Soil Kit (2 SB, 1M, soil jar)
Chemistry (250 / 500 / 1L)
Organics (1L)
Nutrient (250 / 500)
Phenolics (250 ml)
TOC (40 ml / 250 ml)
TOX (250 ml)
Total Metals
Dissolved Metals preserved Y N
O & G (1L)
TPH (1L)
VOA (40 ml 30 ml)
Cyanide (250 ml)
Sulfide (500 ml)
Bacteria (120 ml)
Wipes / swipe/ smear/ filter
Radchem Nalgene (125 / 250 / 500 / 1L)
Radchem Nalgene (1/2 gal. / 1 gal.L)
Cubitainer (500 ml / 4L)
Ziploc
Other
Other
Other
SCURF Back (C016-4 15May2012).xls
Page 13 of 13

Enviro Tech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

Reported: 08/26/2015 10:22
Project: Produced Water Pond Testing
Project Number: Fourstar
Project Manager: Kelsey Padilla

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A01	Detection and quantitation limits are raised due to sample dilution.
A02	The difference between duplicate readings is less than the quantitation limit.
A03	The sample concentration is more than 4 times the spike level.
A07	Detection and quantitation limits were raised due to sample dilution caused by high analyte concentration or matrix interference.
A17	Surrogate not reportable due to sample dilution.
A19	Surrogate is high due to matrix interference. Interferences verified through second extraction/analysis.
L01	The Laboratory Control Sample Water (LCSW) recovery is not within laboratory established control limits.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S09	The surrogate recovery on the sample for this compound was not within the control limits.
Z1	Discrepancy between hexavalent chromium and total chromium results may be due to matris interference.